AMERICAN GAS JOURNAL

SEPTEMBER 1942

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Economical Dependable

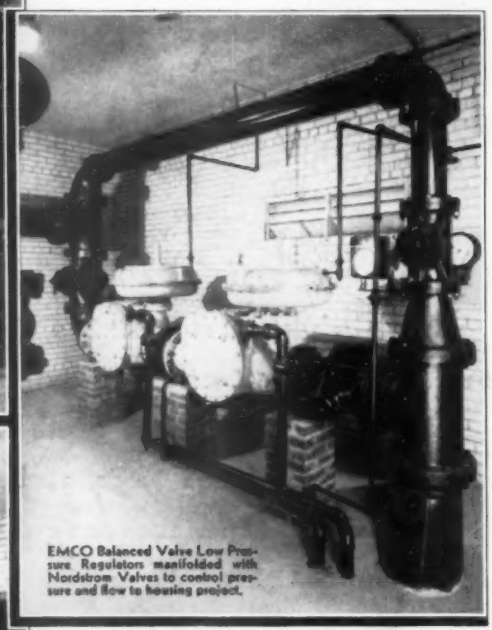
SPACE CONSERVING EQUIPMENT

FOR MEASUREMENT AND CONTROL

in

- HOUSING PROJECTS
- ARMY CAMPS
- WARTIME INDUSTRY

General view of meter room serving large housing project in Philadelphia area. Thirteen EMCO No. 5 Large Capacity Pressed Steel Meters, with Emcorectors; Four 10-inch EMCO Low Pressure Balanced Valve Regulators are used here. All lines are Nordstrom Valve Controlled.



EMCO Balanced Valve Low Pressure Regulators manifolded with Nordstrom Valves to control pressure and flow to housing project.

Battery of EMCO No. 5 Large Capacity Pressed Steel Meters, piped with Emcorectors, on Nordstrom Valve controlled lines in large housing project. The completeness of the EMCO and Nordstrom design makes this space-conserving meter installation possible.

TO THE already tremendous task of supplying gas for domestic and normal industrial consumption, the Gas Industry has undertaken to serve, in addition, new housing projects, army camps and our gigantic wartime industrial factories with this essential fuel.

In order to meet these unprecedented demands, the Gas Industry chooses wisely only equipment which will give efficient, uninterrupted service. Now, just as in peacetime, EMCO Meters and Regulators and Nordstrom Valves are being relied upon for accurate, dependable measurement and control.

From the accompanying illustrations it can readily be seen how valuable space is conserved when EMCO Meters and Regulators and Nordstrom Valves are installed. This graphic example shows one of hundreds of installations wherein EMCO and Nordstrom equipment is giving economical, dependable, accurate measurement and control.

PITTSBURGH EQUITABLE METER COMPANY

NEW YORK · BROOKLYN · DES MOINES · MEMPHIS · OAKLAND · TULSA · CHICAGO · BOSTON

MERCO NORDSTROM VALVE COMPANY
Main Offices, Pittsburgh, Pa.

NATIONAL METER DIVISION, Brooklyn, N. Y.

KANSAS CITY · PHILADELPHIA · SAN FRANCISCO · LOS ANGELES · SEATTLE · HOUSTON · COLUMBIA · BUFFALO

EMCO METERS AND REGULATORS • NORDSTROM LUBRICATED PLUG VALVES

ONE workman in the trench — and an untrained hand at that — can lay and assemble mechanical joint cast iron pipe in the principally-used sizes for gas distribution, as shown by the above photograph. With a Victory program demanding all available skilled labor, remember this fact: Any able-bodied man without previous experience can quickly become expert in assembling the fool-proof, bottle-tight mechanical joints made by the members of the Cast Iron Pipe Research Association. They may vary in design but all are based on the time-tried stuffing-box principle.

Pipe bearing this mark is cast iron pipe.

TRADE MARK REG.

Available in diameters from 1¼ to 84 inches.

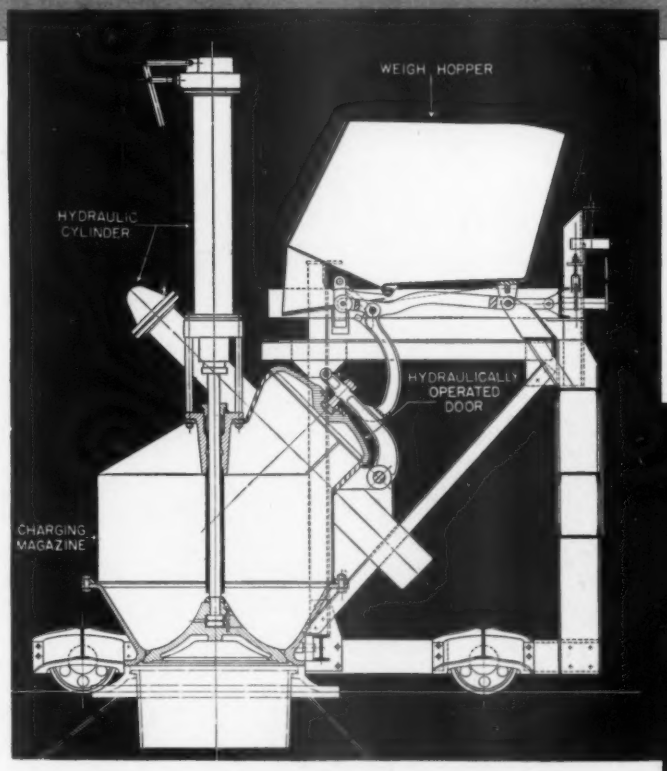
CAST IRON PIPE RESEARCH ASSOCIATION, THOMAS F. WOLFE, RESEARCH ENGINEER, 1015 PEOPLES GAS BUILDING, CHICAGO, ILLINOIS

CAST IRON PIPE

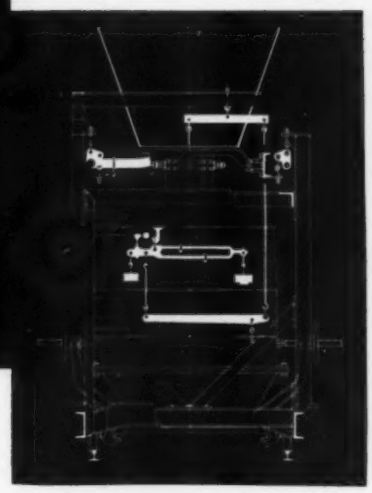
THE STANDARD MATERIAL FOR UNDERGROUND MAINS

SEP 12 1942

SEMET-SOLVAY *Automatic* CHARGING MACHINE



INCREASES CAPACITY *Saves Labor*



At least ten per cent increase in capacity of your water gas machine can be obtained by the addition of a Semet-Solvay Automatic Charging Machine. Part of the increase is obtained by eliminating shut-downs for charging, part from the added efficiency of a fuel bed of constant depth.

The charger refuels the generator once every cycle during the back-run period. Fuel is accurately weighed by a built-in scale and is uniformly distributed by a hydraulically-controlled spreader. A clamping device gives a gas-tight closure between charger and generator. Seating of the doors is cushioned by the hydraulic cylinders.

The Semet-Solvay Automatic Charging Machine is built for use with any make of water gas or blue gas machine. Automatic charging is not recommended however when the fuel used is bituminous coal. If you operate on coke or anthracite coal, why not write us for further information and a list of satisfied users.

SEMET-SOLVAY ENGINEERING CORPORATION

40 Rector Street — New York, N. Y.

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Spreading the news NUTRITION IN

How the Servel
Nutrition In Industry Plan
can help break the lost-time bottleneck
in your War Plant
NO LOST TIME THIS MONTH
Here's how Gas Companies are ready to help
WATCH
90% of absenteeism is caused by ILLNESS . . . not ACCIDENTS
PROPER NUTRITION CAN MEAN:
★ Fewer days lost
★ Increased production
★ Fewer rejects
★ Better safety record
SERVEL, INC.
This advertisement appearing in
SATURDAY EVENING POST Sept. 19
TIME Oct. 26
NEWSWEEK Oct. 12
BUSINESS WEEK Sept. 19
UNITED STATES NEWS Sept. 25
FACTORY MANAGEMENT & MAINTENANCE September
MODERN INDUSTRY September

about the INDUSTRY PLAN

TO AMERICA'S WAR PLANT MANAGERS AND WORKERS, AND THEIR FAMILIES!

MILLIONS OF PEOPLE—plant managers, war workers, men and women in industry and their families—will read this message . . . the first public announcement of Servel's Nutrition In Industry Plan!

This dramatic double-page advertisement will appear in the September and October issues of leading American magazines . . . at a time when Gas Companies everywhere will be doing their utmost to carry forward this program!

Already the Nutrition In Industry Plan is gaining momentum. More and more experts are realizing that poor nutrition and illness are slowing down our war effort. Recently the Government announced a major drive for manpower conservation through proper industrial nutrition. The Servel Plan will enable Gas Companies to continue their vital nutrition work . . . and support the Government drive quickly and efficiently.

The value of proper diet among war workers cannot be overestimated! It will mean millions of man-hours gained in the battle of production . . . more ships, guns, tanks for our fighting forces. That is why the Nutrition In Industry Plan is an excellent opportunity for every Gas Company to serve its customers . . . *and* its country!

SO DO THIS TODAY: Get in touch with your local, Government-approved Nutrition Committee. Tell them about Servel's Nutrition In Industry Plan. Then determine how this Plan may be applied to the war plants in your own community.

SERVEL, *Inc.*

PEACETIME MANUFACTURERS OF THE SERVEL GAS REFRIGERATOR

WINS GOOD WILL FOR GAS AND GAS SERVICE

In This—The Great Emergency—

CLEVELANDS

As Always—Are Coming Through!

When there is a ditch to dig—or fill—you'll always be glad you bought a "CLEVELAND." • • • Keep them in fighting trim by regular attention to maintenance and lubrication.

THE CLEVELAND TRENCHER COMPANY

20100 ST. CLAIR AVE. "Pioneer of the Small Trencher" CLEVELAND, OHIO

"CLEVELANDS" Save More . . . Because they Do More

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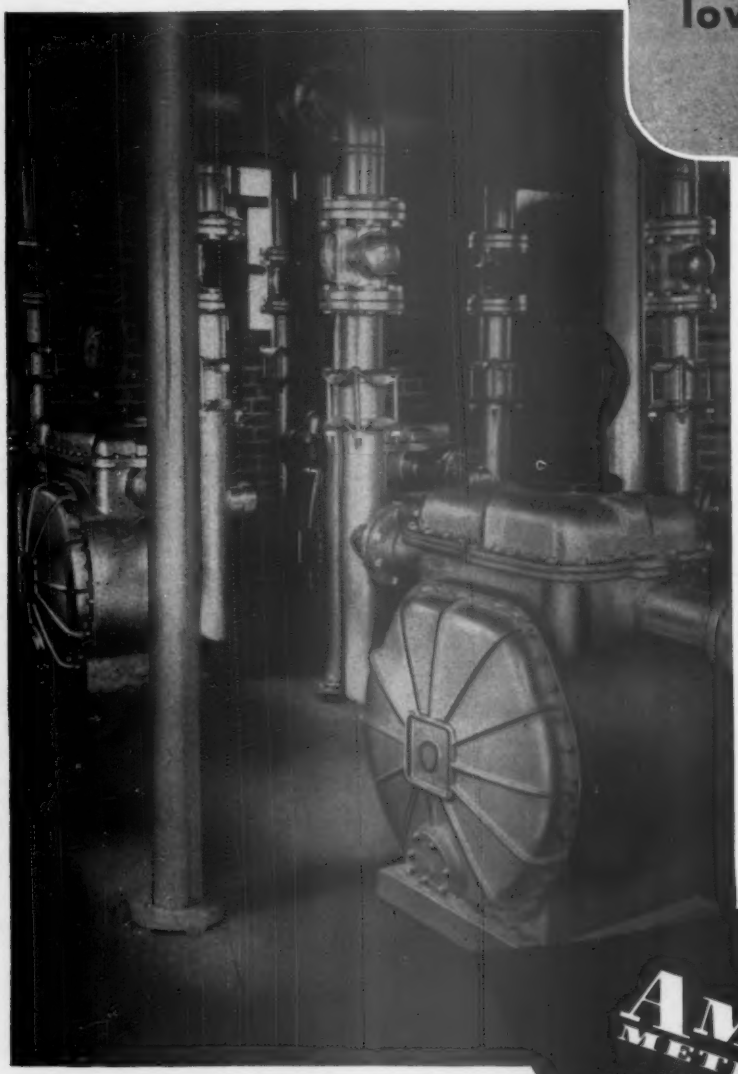
Once again

IRONCASE meters chosen for accuracy and low performance cost!



● Showing three of the four master meters (Metric-American 500-B Ironcase models—equipped with Metric Volume and Pressure Gages) inside meter house of a prominent low cost housing project.

● **Long-life meter accuracy and stamina, are carefully considered economy factors in this installation at a newly completed FHA low cost housing project in a large Southern city. In peace and wartime economy, the space saving, rustproof METRIC-AMERICAN Ironcase contributes to low cost gas service for thousands of industrial and other large-volume users of gas.**

. . . Outstanding performance made possible by Ironcase features such as one-piece body casting, rigidly fastened full bellows diaphragms, large capacity valves (non-pulsating, minimum friction type), gas-tight stuffing boxes, full provision for bearing lubrication and for condensate drainage.

A-1820

AMERICAN METER COMPANY
INCORPORATED ESTABLISHED 1836
METRIC METAL WORKS • ERIE, PA.

SEPTEMBER
1942

AMERICAN
GAS JOURNAL

VOLUME 157
NO. 3

Meter Reading Practices of Gas Companies During the Emergency

DUE TO THE NUMBER of men entering the Army, Navy and other government agencies from gas companies, the matter of reading customer's meters monthly is beginning to present a problem to many companies.

In most states a ruling by the Public Utility Commission is necessary before the company can make any changes in the frequency of reading meters. On August 11th, the New York State Public Service Commission issued a ruling granting permission to gas companies in New York state to use post cards for billing purposes. The Commission ruled that companies using this method must furnish customers a card giving rates and the classification under which the customer is served. The Commission recently granted a permit to the Niagara-Hudson system to read meters bimonthly and quarterly to save gasolene and tires. The Utility Commissions of several other states have granted the same privileges.

While most gas companies have not as yet changed their regular procedure, they are making plans to do so if and when the situation demands it.

Here are stated briefly the plans several companies have put into effect, or are contemplating.

Consolidated Gas Electric Light and Power Company of Baltimore, Maryland reports:

"The Company serves approximately 335,000 customers, of which 235,000 use both gas and electric services. 14,500 use gas only and 85,000 use electric service only. The area we serve covers 2,270 square miles, of which approximately 300 square miles is densely populated and the balance, something less than 2,000 square miles, is sparsely populated.

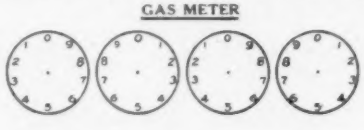
"It has been our practice to read all meters monthly. In the densely populated sections, our meter readers use public transportation to get to their districts and then proceed on foot from house to house, while in the sparsely populated sections we have been using automotive transportation as public transportation is either non-existent or inadequate for our needs.

"In order to conserve tires and gasoline, we adopted, effective June 1, 1942, a plan of quarterly meter readings in these sparsely settled districts but are continuing to read meters monthly where no automobile transportation is involved. Certain large commercial and industrial users in outlying districts will continue on the monthly basis. In those districts where the meters are read quarterly, we are sending estimated bills for two successive months and a bill based on an actual meter reading for the third month.

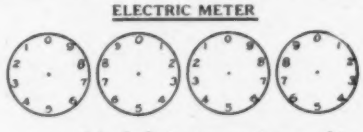
"The plan further provides that if the estimated bill is unacceptable to the customer, we will mail a return postal card (see illustration), so that the customer may read his own meter and forward the reading to us. In the event that the customer fails to

I have read the gas and electric meters on these premises on _____, and marked the exact position of the hands on the dials as shown below with lines drawn from rim of the circle to center of dials.

GAS METER



ELECTRIC METER



(a) I desire to continue making card readings of my meters

Answer YES ☐ NO ☐

(b) I prefer to receive estimated service bills and have the Gas and Electric Company make actual readings each third month

Answer YES ☐ NO ☐

do so, we will render an estimated bill. Although we have not had much experience with this plan, it seems to be working out satisfactorily.

"Prior to the adoption of this plan, we used approximately 200,000 miles of automotive travel, and it is estimated that this new plan will save approximately 60% of this."

Boston Consolidated Gas Company, Boston, Mass., reports:

"The Massachusetts Department of Public Utilities has issued an order permitting companies in this Commonwealth to read meters bi-monthly and estimate the bill for the off month, with the understanding that no customer would be shut off for non-payment on an estimated bill.

"While we have lost quite a large number of meter readers to military service, we are not yet in the position where it is necessary for us to take advantage of this order. It may be that in the future it will be necessary in some sparsely settled outlying territory but we are not contemplating any change in the districts which can be covered on foot.

"We have given some thought to the possibility of employing female meter readers if the shortage became acute but this has been merely in the discussion stage."

Rochester Gas and Electric Corporation, Rochester, New York, reports:

"So far our meter reading and billing routine has not been disturbed by war conditions as our forces have not yet been seriously depleted, and we have sufficient male help for our purposes.

"However, we have provision in our tariffs and expect to adopt a plan for reading meters in the rural and suburban areas quarterly and sending out two intermediate estimated bills between quarters in order to conserve rubber, gas and personnel. This plan will become effective about September of this year."

Louisville Gas and Electric Company, Louisville, Kentucky, reports:

"The only change we have made in our schedule of reading meters up to the present time has been in the rural sections where the meters are read by men in automobiles. Several months ago we began reading the meters in these sections every other month, estimating the bills in the intervening month. This has reduced the number of automobiles and men employed on this work by one-half."

The Peoples Gas Light and Coke Company, Chicago, Illinois, reports:

"We have studied bi-monthly and tri-monthly customer billing; neither plan has been adopted.

"During the past six years we have in some cases issued averaged bills calculated upon the basis of the average use of service in previous months.

"The use of female meter readers has not been seriously considered, because we have been successful in obtaining young men from other departments in our Company, and some new help has been employed for this work.

"No immediate changes are contemplated in our present meter reading plans. We will revise our procedures as warranted by changing conditions."

Portland Gas & Coke Company, Portland, Oregon, reports:

"At this time Portland Gas & Coke Company is studying several possible plans for reading customers' meters during this emergency but, as yet, our studies are not complete. However, as soon as we have evolved a satisfactory plan, we will be very happy to advise you as to its details."

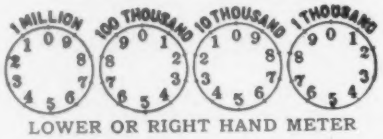
Minneapolis Gas Light Company, Minneapolis, Minnesota, reports:

"As yet we have made no material change in our program for monthly reading of our customers' meters.

"We have, however, made a change in connection with the reading of a small number of our meters located in thinly populated suburban territory. In order to avoid the use of automobiles in reading these meters, they are read only every third month; and for the intermediate months a return post card (see illustration) is sent to the customer, requesting him to read his own meter for these months by marking the position of the meter hands on the meter dials shown on the card."

GAS METER READING

TOP OR LEFT HAND METER



LOWER OR RIGHT HAND METER

As you face the meter, starting at the right, will you please draw lines on the above dials to represent the hands as they appear on your meter. If you have more than one meter kindly mark both sets of dials. If you have only one meter please mark the dials in top row.

MINNEAPOLIS GAS LIGHT COMPANY

Please
Mail This Card Not Later Than

Public Service Company of Indiana, Inc., Indianapolis, Indiana, reports:

"Public Service Company of Indiana, Inc., has inaugurated a plan of having customer reading of meters on rural lines only in communities of less than 1,000 population. The customer's reading will be returned on cards for two months and the company will read the meter on the third month."

Birmingham Gas Company, Birmingham, Alabama, reports:

"Up to this time we have not made any application to the Alabama Public Service Commission for permission to depart from our regular practice of reading customers' meters monthly. Of course, we recognize that, if the transportation situation becomes more critical, we may have to change this practice. When this time comes, it seems to us that the only practical method for us to use would be to estimate the consumption on each meter for one or two months and then on the second or third month read the meter to correct any error made in our estimates.

"If we would ask the Commission for permission to operate on the above basis, they would undoubtedly insist that we would give the customer the option of reading his meter in those months that would otherwise be estimated and render bills in those months for the amounts determined from such readings. It happens that in Birmingham a good many meters are located so that the customer would have considerable difficulty in making a reading, so that we would not expect to have very many exercise this option."

Michigan Consolidated Gas Company, Detroit, Michigan, reports:

"We are now following the normal practice of reading meters once each month and billing monthly from these readings.

"We have given some consideration to the desirability of reading bimonthly or tri-monthly and rendering estimated bills for either one month or for two successive months as the case might be. Permission has

been obtained from the Michigan Public Service Commission to inaugurate such procedure, but we have not as yet definitely determined upon the adoption of this practice."

The Laclede Gas Light Company, Saint Louis, Missouri, reports:

"No change has been made in our method of reading customer's meters. We are making our regular monthly readings.

"We had some turnover in the Meter Reading Department due to the induction of some of the employees into the armed service, and replacements are made by moving young men from our group of bill deliverers or retake men. This is a program followed in order that we may comply with our understanding with the local union organization with which these employees are affiliated.

"We have not yet experienced serious difficulty in getting replacements for our bill delivery group so that it has not been necessary to consider the employment of female help in this department."

Public Service Company of Colorado, Denver, Colorado, reports:

"Up to date we have not made any changes in our monthly reading of gas meters but consideration is being given to the feasibility of bi-monthly readings and estimating the bill on the odd month in areas outside of urban territory. We do not believe that a billing based on the previous month's consumption would be satisfactory due to the large number of house heating customers served. If we adopt this bi-monthly reading, we expect to use degree day charts for billing house heating customers and, of course, adjustments will be made with the next actual reading.

"In rural electric areas we are now reading meters quarterly and estimating the bills for the two intervening months. This system was adopted in June 1942 and, therefore, has not been in operation long enough for us to furnish any information relative to the mileage or man hours saved or reaction of our customers."

Consumers Power Co., Jackson, Mich., reports:

"Use of a post card type of monthly statement in the Jackson Division was begun August 1. Their adoption by us seems particularly appropriate at the present time because of the saving in materials and money which they make possible. This will tend to offset a small part of the rise in many other items of expense. Experience elsewhere has shown that the postcard statement is popular with customers because it is simple and easy to handle."

Because most divisions lack equipment suitable for post card billing, and because no new equipment is available, the innovation will not be extended to other divisions immediately.

The Jackson Division sends monthly statements covering gas or electric service or both to some 60,000 addresses in Jackson, Lenawee, Hillsdale, Monroe, Washtenaw, Ingham, Branch and Livingston counties. Statements of customers in the cities of Jackson and Adrian, totaling 20,000, have been delivered by messenger, in envelopes specially designed for hanging on doorknobs. Customers in the smaller communities and rural areas have received their statements through the mail in standard envelopes.

The post card statements are similar in form to the statements previously in use, but some condensation has been necessary because of the smaller size. One end of the card is designed for use as a receipt when the bill is paid.

The Cincinnati Gas & Electric Company, Cincinnati, Ohio, reports:

"No change has as yet been made in the meter reading procedure of the Cincinnati Gas & Electric Company. We are still reading and billing the city, urban and rural accounts on a monthly basis. In the past the bills have been delivered by our own employees. (Bill Passers).

"On November 1 we expect to change our present bill form to a post-card bill. This will permit us to mail those routes on which a vacancy exists in the bill passing division."

Providence Gas Company, Providence, R. I., reports:

"The local Public Utility Commission is considering the matter of changing the monthly reading of customers' meters to some other scheme. As yet nothing has matured."

Jacksonville Gas Company, Jacksonville, Florida, reports:

"For the present we are not contemplating making any change in meter reading, at least not during 1942."

Equitable Gas Company, Pittsburgh, Penna., reports:

"Up to date, we have experienced no difficulty in procuring male help for the purpose of meter reading. However, in the interest of curtailing the use of automobiles and thereby conserving rubber, we are considering reading meters in the rural districts where the use of automobiles is required, quarterly, billings to be made during the intervening months on an estimated basis. At the present time there are six automobiles owned by the company that are used part time for the purpose of reading meters in rural areas.

"In regard to the urban areas, we believe that if it becomes difficult to procure male help for meter reading, we would find it more advantageous to read meters quarterly and bill on an estimated basis in the intervening months rather than to utilize female help. We feel that due to the character of the work involved and the hazards in connection with it, it would not be advisable to attempt to use female help for reading meters in our areas.

"As stated previously, we have not yet been forced to make any change in our meter reading arrangements. The thoughts given above cover changes which we may make in case the manpower and the rubber situation become more acute."

Pacific Gas and Electric Company, San Francisco, California, reports:

"So far Pacific Gas and Electric Company has made no changes in its reading of gas meters and has not yet faced the necessity of employing women as meter readers.

"We have applied to the California Railroad Commission for permission to read meters every two months instead of every month as at present. A Commission answer to this application is expected within a few days."

Only a few gas companies are considering the use of female readers. This is due to their being able to utilize employees from other departments to keep up their meter reading staff. The Atlanta Gas Light Company, Atlanta, Georgia, has employed a number of girls to read meters. The story of their training and other details was published on page 40 of the July issue of the Journal. As stated, most State Public Utility Commissions have made rulings to permit modification of present monthly meter readings, and undoubtedly the others will do so when the Utilities in their states make a request to change present rulings.

Public Service Electric and Gas Co., Newark, N. J. reports:

"The company will read gas and electric meters in outlying districts only, every third month. About 75,000 accounts in the company's territory will be affected. The districts that do not have rural territory will not be affected.

"For their convenience in submitting payments regularly, customers affected by the revision in meter reading procedure will receive a bill each month. The first monthly bill will be an averaged bill based on estimated meter readings. Subsequent bills for the first and second months following each actual reading of their meters by the Company will be averaged bills, unless the customer prefers to read his own meters. Every third monthly bill will be based on actual meter readings by a Company representative. Any difference between the actual use and the estimated use, will adjust itself when the meters are read every third month.

"If, during the months when meters will not be read by the Company representative, a customer prefers to read his own meters and to submit such readings to the Company on specified dates, bills based on his readings will be sent him instead of averaged bills. It is estimated the plan will result in a saving of 75,000 miles of automobile usage.

"The plan becomes effective early in September."

Rockland Light and Power Company, Nyack, N. Y., reports:

They have announced a plan in which the customers will be asked to read their own meters two out of three months in the year. The readings every third month will be taken by a company employee, as heretofore. If consumers make errors in readings or fail to submit an estimate any month the company will send an "average" bill based on the consumers' average monthly consumption in the preceding year. The plan is expected to save an estimated 60,000 miles a year in gasoline and tire usage by the utility's meter readers' cars.

The company supplies all the electricity and most of the gas to commercial and residential users in Rockland, Orange and part of Sullivan Counties in New York, the northern part of Bergen County in New Jersey and Pike County in Pennsylvania.

The entire territory will be divided into "neighborhoods," each of about five or six square miles, and each one will be serviced by a resident employee of the company. This employee will read his neighbors' meters every third month, make minor repairs and adjustments and act as sales agent for appliances.

Brooklyn Union Gas Co., Brooklyn, N. Y., reports:

This company has made application to the Public Service Commission of New York State for approval of a plan for bi-monthly reading and bi-monthly billing of customer meters. A hearing on the application has been held by the commission but up to time of going to press a decision has not been rendered. The change from monthly to bi-monthly reading and billing will affect 745,000 meters. In filing the proposal, the company said the change is intended to relieve the labor shortage and as an economy measure that would save $180,000 annually.

New Orleans Public Service, Inc., New Orleans, La., reports:

"Although we are interested in and are studying the experience of other companies in reading meters each second or third month, we have not as yet found it necessary or advisable to adopt this system. Thus far we have not employed any female meter readers."

Federal Power Commission Receives Proposed Rate Schedules From Natural Gas Pipeline Company of America

The Federal Power Commission on August 24th announced its receipt of new rate schedules filed by the Natural Gas Pipeline Company of America proposing natural gas wholesale rate reductions to its utility customers in Illinois, Iowa, Kansas and Nebraska of approximately $2,738,000 annually. This proposed reduction, when added to the Commission's "interim" rate order of July 23, 1940, upheld by the Supreme Court which reduced the Pipeline Company's wholesale rates $3,770,000 annually, would save the company's utility customers approximately $6,500,000 per year.

The principal change in the company's rates is a substantial reduction in the demand charge per thousand cubic feet per month in General Rate Schedule G-1. The proposed schedules contain a two-part rate, in which the commodity charge is 7c per thousand cubic feet for all gas used. The demand charge was lowered from $2.82 to $2.40 in a recent "standardization" filing by the company, which was accepted by the Commission without investigation, and is now further lowered to $1.46 in the new schedules. The application of this new rate results in an average "gate-rate" (including demand and commodity charges) of approximately 16.6 cents per thousand cubic feet at an annual load factor of 50 per cent; 13.4 cents per thousand at 75 per cent load factor; and 11.8 cents at 100 per cent load factor. The rates are for gas containing 1,000 Btu per cubic foot, and provision is made for adjustments for variations in heat content.

Reductions effected by the proposed new rate schedules, when added to the rate-cut ordered by the Commission. would result in total annual savings of $5,751,000 to Chicago District Pipeline Company; $532,000 to Iowa-Illinois Gas & Electric Company; and comparable reductions to other utility customers, with exception of Illinois-Iowa Power Co. and Central Illinois Electric & Gas Co., which were not affected by the July 23, 1940 order.

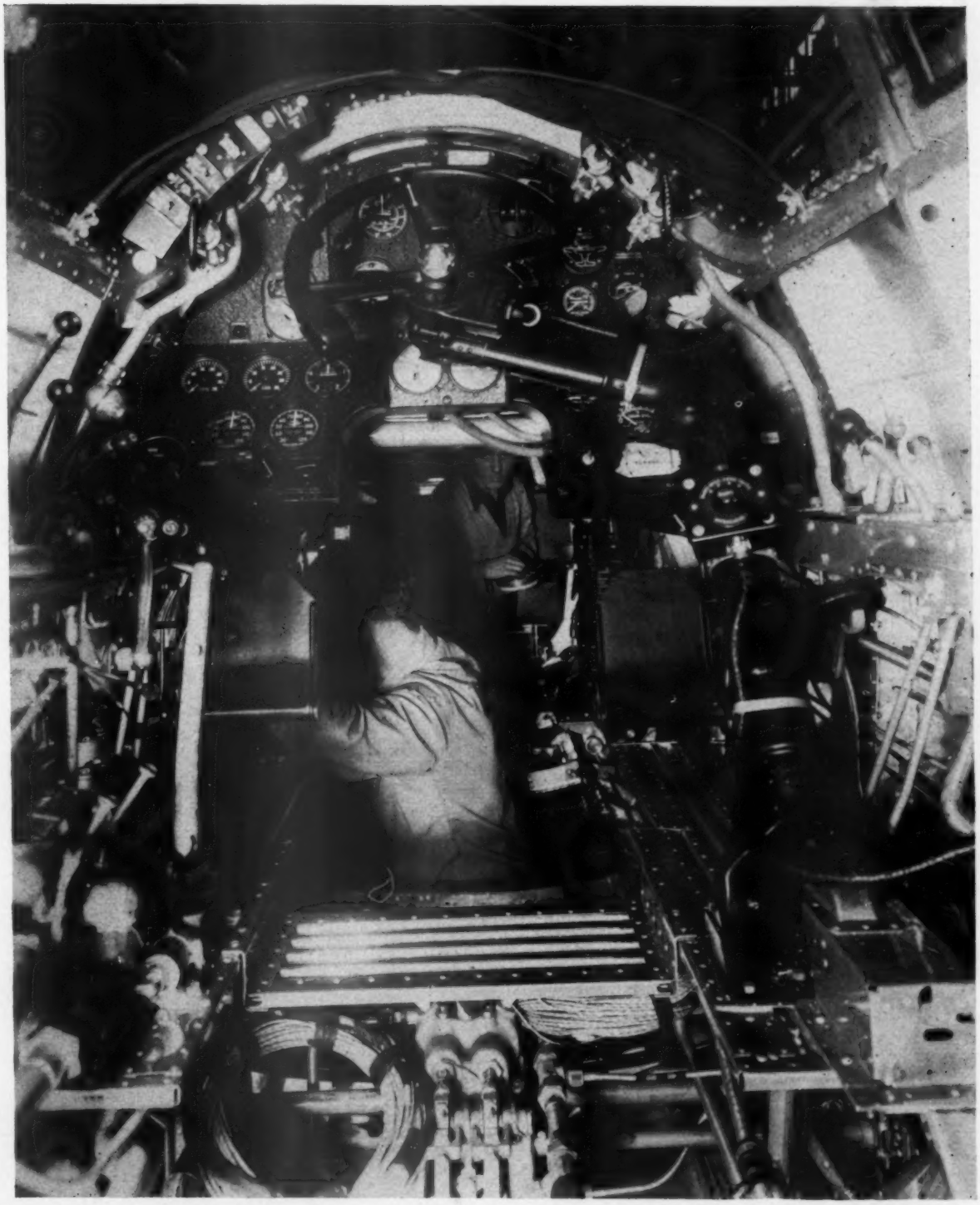
$348,377,389 Salvaged In Non-Ferrous Metals

The Bureau of Mines reports that nonferrous metals valued at $348,377,389 were recovered from purchased scrap and residues during 1941.

Recovery figures included the secondary metal contents of unalloyed metals, alloys and chemical products.

Metals recovered from new scrap resulting from manufacturing operations accounted for $143,114,982, or 41 per cent of the total value, while recovery from old scrap amounted to $205,262,407.

The Pilot's Compartment of a Martin Bomber



There are over 30,000 different parts in a bomber. A small fraction of these is seen in this view of the pilot's compartment of a Glenn L. Martin plane. Extensive use of instruments and controls makes American planes the best equipped in world. Army says this picture reveals no secrets. Mechanics are working on instrument assembly. Approved for release by the Army and Navy.

Radio-Telephone Equipment Would Make Possible Necessary Communication in Handling Air Raid Repairs

By Special Correspondent

TO OBVIATE the possibility of broken telephone lines preventing communications necessary for the handling of gas main repairs during an emergency, the Southern Counties Gas Co. (headquarters in Los Angeles) has installed a radio telephone system which will get information through under any circumstances.

While the most obvious war-time use for such equipment would occur during possible bombings, the company considers it a valuable permanent investment. Gas mains are likely to be broken during floods or earthquakes or in any other major disaster —and when mains are out, telephone lines are usually down too.

As several companies over the country have found, a lack of communication facilities is the biggest single handicap in getting repairs made promptly, during floods. Even though workmen are able to get to the site of a break in the main, a lack of information on what has occurred elsewhere makes it difficult if not impossible for them to proceed without further instructions.

But that will not be the case with Southern Counties if any sort of trouble should occur in California. The radio telephone should make it possible for men at the repair site to report conditions as they find them and to get instructions promptly.

The equipment installed consists of the following:

1. Two 50 watt sending and receiving sets mounted on trailers.

2. Three 15 watt sets installed in regular company cars.

3. Six two watt portable sets which can be moved by hand to any place that a man can reach on foot.

4. Three fixed 50 watt stations in key cities scattered through the company territory.

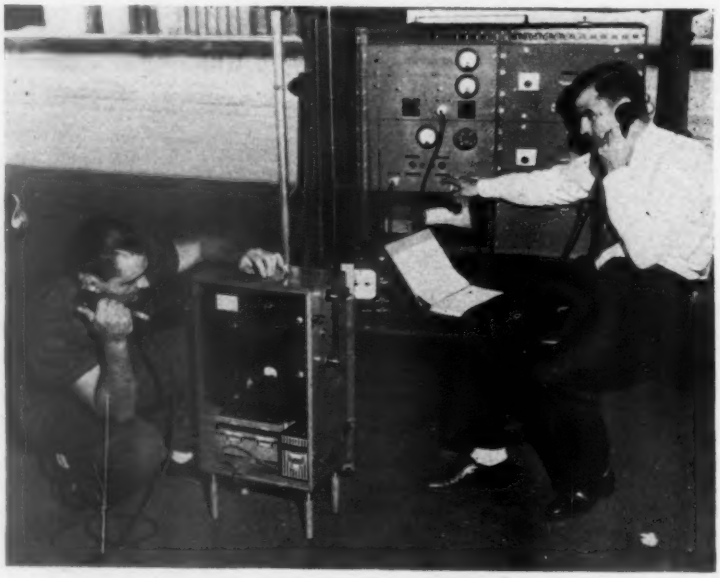
The fixed stations are permanent Edison company installations, one at Alhambra, one at Katella in Orange County and a third at Saticoy in Ventura County. Any or all of these would become instantly available for company use during an emergency. The portable equipment was purchased by Southern Counties Gas Co.

H. J. Keeling, General Office Engineer for the company and one of the designers of the system, cites the following example of how this equipment would work during an emergency:

"Assume that there is a line out over a creek 25 miles from Saticoy and that all telephone lines are down in Ventura County. The 50 watt trailer, the 15 watt radio car and the two watt hand portable units based at Ventura would all swing into action.

"The trailer would be towed as far toward the damage as possible, say to a road about three miles from the creek. The two portable hand units would be carried right up to the break. The operators of the small sets would send their information to the trailer. The trailer would relay the facts to the Edison station at Saticoy. The data would then be relayed to the second Edison station at Alhambra. From here, details could probably be telephoned into the home office.

"Instructions from the General Office would then be relayed back to the scene of the damage in reverse order. The whole communication would probably require only a matter of minutes—rather than the hours which would be required for getting a messenger back and forth. Of course, practically speaking, repair men would probably use their own judgment in making some sort of emergency repair if communication facilities weren't available. But that might lead to other problems. In any case, there would be a long delay before the repairmen could get back to civilization and report what repairs had been made."



Illustrating the Radio-Telephone Set-up.

Exactly this same type of procedure would be followed in handling damage caused by an air raid. Because it would remain in constant touch with the men in the field, the General Office could direct every operation in light of the general picture. There would be no guess-work or delay. Vital gas supplies would be restored at the first possible moment.

A Program of Gas Fuel Conservation

Insulation—Regulation—Recirculation—Recovery

By
William J. Shore
Heating and Industrial Engineer
New York

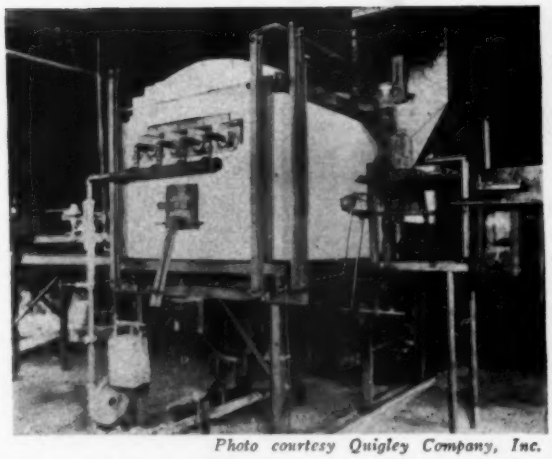


Photo courtesy Quigley Company, Inc.

This typical job of insulation on a gas fired furnace conserves heat by insulating roof and sides using a plastic mixture.

A BRIEF OUTLINE and discussion of the various means and applications that may be used effectively to use and apply gas fuel for industrial purposes more efficiently and more effectively.

Insulation

Wherever gas heat is employed, the use of insulation is of real worth and value.

Where metal containers hold heated materials, they, the container shells should always be covered with insulation.

The use of insulation on all sides of kettles and drums reduces the loss of heat from the sides and surfaces of the containers, leaving the only heat loss from the unexposed top of the materials that are under heat.

The more thickness and layers of insulation that are employed the less loss of heat. The better quality of insulation employed, the less the rate of loss of heat. It is sometimes more effective to use large quantities of cheap materials for insulation than small quantities of expensive and more effective insulation. These relative worths can easily be worked out with but a slight knowledge of mathematics.

The better the insulation, the less heat there will be spread in the vicinity of the materials that are being handled. The more comfortable the working conditions are, the more easily will the work be completed.

The less heat that is lost from heated containers, the less fuel will be required to bring the materials up to heat, or for a like quantity of fuel, the length of time required to bring the materials up to heat will be appreciably shortened.

A shorter time for the process or work involved results in a lower labor cost, or to put it another way, for an equivalent amount of machinery, the amount of output per day, or week or month will be increased. This is beneficial all around both for labor and for capital.

Old fashioned core ovens that are operated at a temperature of about 400°F, lose more heat through the red brick walls than is put into the molds that are set there to dry, or cores that are in the oven to be baked.

Such heat that goes out into the foundry is highly uncomfortable to the workers.

Where a layer of two inches of insulation is installed on the inside of a brick core oven, the results are so satisfactory, the fuel consumption is reduced by more than 50% with greater comfort and better working conditions in the foundry.

Where gas is fired into refractory chambers, new insulating refractories are useful in several ways. They are light and they reduce the size of the furnace or oven equipment that is to be built. Due to the fact that they have a heat loss of but one sixth of ordinary fire brick, it means that it requires but one fourth as much fuel to bring the oven to heat ready for use. It means that the oven or furnace can be more effectively used—that is to say, more hours of useful production, lower labor costs, lower initial investment costs—and sometimes a relatively high priced fuel like gas may be less in cost than coal or coke.

Whatever heat is dissipated into the surrounding air, it constitutes a loss and a waste that is not to be suffered in a time like the present.

Regulation

By regulation we mean two separate things which will be discussed in turn.

In the use of artificial fuel gas the relative amounts of gas and air that are mixed before burning is a matter of regulation.

There are many old style pipe burners in operation where the gas escapes from holes in a pipe. The use of such burners is not the most efficient manner of burning gas. The correct amount of air that is induced and mixed with the gas varies from time to time, ordinary operators are not able to judge the best mixture from looking at the flame, and in many instances, more fuel is used than need be.

To replace such burners with the modern type of equipment where means are employed to secure an accurate mixture of air and gas and to maintain such conditions regardless of variations in other elements is important today.

There are instances where savings of as much as 40% have been effective.

The other matter of regulation refers to the temperature regulation.

Where in any process a temperature is employed higher than need be, a waste is involved, a waste of valuable fuel.

If in the baking of cores, the ignorant foundry attendant thinks he can obtain quicker results by setting the amount at 500°F. instead of 350 or 375°F., there is a waste of fuel. There is a greater loss in heat lost through the walls of the oven and the discharging air, and frequently such excess heat does more harm to the cores than good.

If in drying rugs and carpets, the temperature is set to 175°F. instead of 125°F., the results are rarely as good. The rugs do not look as good nor do they feel as good. Besides at the higher figure, the fuel expended is far greater than it need be.

For this reason it is of interest and of real value to have installed the best type of commercial temperature control and indicating and recording equipment.

The closer temperatures are maintained steady at the lowest values consistent with the best finished product quality, the less fuel will be consumed.

Intensive studies in each type of industry and class of work are much more important than relying upon the unsupported word or opinion of the workers. Lower temperatures properly maintained will result in the lowest possible consumption of BTUs and naturally the lowest cost of fuel.

Recirculation

The principles of the value of air circulation have been known for many years, but it is only in the recent years that its use has become common.

The use of recirculating air for drying and heating operations is extremely effective and in many ways.

Practically all old type of dryers fail to make use of this principle, and those that do, do so in such a half hearted manner, that it is not really effective.

The use of recirculation of air contents in the ovens or furnaces effects several useful purposes. These are:

By the rapid travel and mixing of the air, it is possible for all parts of the air to give up or absorb heat. The heating efficiency is increased as much as twenty-five percent.

In other words a net saving of 25% in the amount of BTUs required to do a certain operation. Hence a saving of 25% in fuel costs and fuel consumption.

The rapid travel of the air over and against the materials to be heated or cooled increases the rate of heat transfer and does its work so much more effectively than air that is heated and at rest.

In addition to the fuel saving effected, recirculation cuts down the length of time to complete a cooling or heating cycle.

This reduction of time, once again means that a greater output may be achieved with the equipment in operation. And with this greater output goes a corresponding saving in labor costs with lower overhead costs.

The reason none of the old fashioned core ovens have never done a good job of core baking or mold drying is in the fact that while there is plenty of heat in the oven it is static rather than dynamic, and the materials merely stew in their own juice rather than bake or dry effectively.

Recirculating equipment is simple to design and install. The slight cost of electric energy involved in operating the blower equipment is negligible, a matter of a few cents per hour.

Recovery

By this term we mean recovery of whatever heat values that are now wasted and that might be employed usefully and at a profit to the gas user.

There are certain types of heating where a temperature of 1,000°F. or more are maintained in the oven or furnace. In such instances the temperature of the flue or exhaust gases is about 1200°F. or more.

Where this exhaust is allowed to escape, it is a matter of plain waste. Combustion gases at temperatures of 1,000°F. or over have still about one third of the heat of the fuel in them. Such temperatures may be gainfully diverted and employed in various means. Sometimes they may be directed into drying rooms where temperatures of 300°F. are employed. In such cases we may extract the heat available from 400 to 1,000 degrees at no cost beyond the cost of conducting the gases to the dry rooms. In other instances these gases may be used to heat quantities of water for certain process work. Other times they may be passed through heat exchangers and may be used to heat the premises in the winter time.

Often times, these applications are right to hand, and no one has had the time or the sense to make note of them and to take advantage of them.

If distances separate them, it is always possible to heat water and pump the contents from one location to the other.

By checking up on these various types of heat applications in various industries it is possible to reduce the gas consumption of the users, merely by using up all of the available heat that in the past has been thrown away to no good purpose.

Conclusion

In order to put into practice the engineering recommendations set forth above, it is most essential that the Gas Utility has the interest of their customers at heart. By the same token, the customers must have respect for the opinion of the Utility and must have confidence in its recommendations.

A systematic survey in which the Gas Engineer is allowed the privilege of going through the plant, with his eyes open and his mind alert to the operations that are taking place—will prove of value to the Utility and to the Consumer.

The utility can show the consumer how to use the gas fuel most effectively and most efficiently.

Any saving effected in gas consumption will release that much to other industries.

Any financial saving to the consumer will make him that much ready to consider gas for other services at a later date.

Holders Approve Utility Mergers

Stockholders of General Public Utilities at a special meeting August 10th approved the merger of Community Power & Light Co. into Southwestern Public Service.

The merger is part of a plan of integration and simplification of Community Power & Light Co. system recently approved by the Securities and Exchange Commission.

National Safety Congress and Exposition

The date and location of the 31st National Safety Congress and Exposition have been changed because the government has taken over for military purposes the Stevens and Congress Hotels in Chicago, where the Congress originally was to have been held.

The 1942 Congress will be held October 27, 28, 29. It will be housed in three big Chicago hotels—the Sherman, the La Salle and the Morrison. Convention headquarters will be in the Sherman.

These changes will in no way affect the size, scope and importance of the Congress. There will be 200 sessions, with 500 program participants.

A.G.A. Issues Second Installment of "War Protection of the Gas Industry"

Material on Air Raid Protection makes up the major part of the second release by A.G.A. of the results of its studies of measures recommended to the gas industry for safeguarding its properties.

The recommendations are quite comprehensive and specific. They cover works and station structures, protection of personnel, training of special crews, cooperation with the authorities, operating procedures, fire protection, protection of office, shop and other buildings, distribution system, transmission mains and pumping stations, and employee training.

Also included in this release are sections on reserve supplies and cooperation with other gas companies.

A. J. Westcott Joins Roanoke Gas Co.

A. J. Wescott, division engineer of the Raleigh, N. C., Gas Co., has resigned to accept a similar position with the Roanoke, Va., Gas Co.

Six Steps That Have Cut Tire Usage By 45 Per Cent in Southern California

By
Lucius S. Flint

A COMPREHENSIVE PROGRAM of elimination, substitution and control has enabled Southern California's two leading companies to reduce automobile and truck travel in an amazing way.

In June 1942, the Southern Counties Gas Co. cut its 1941 mileage by more than 60 per cent. For the period covering January through June, the company was able to achieve an *aggregate* saving of 44.6 per cent.

While slightly less spectacular because this company is much larger, the savings of Southern California Gas Co. are equally significant. This company's June gain amounted to more than 40 per cent and it was expected that by the end of the summer the average saving for the year to date would run in this same neighborhood.

Those reductions may be traced primarily to the following steps:

1. Adoption of a consumer education program.
2. Extremely careful pre-routing of orders by the operating departments.
3. Elimination of non-request service calls.
4. Use of bicycles and scooters wherever practical (the latter have now been discontinued for reasons which will be explained later).
5. Use of public conveyances by employees.
6. Adoption of a pooling arrangement whereby the company cars remaining in use are made to do a maximum amount of work with a minimum of mileage.

Soon after the rubber emergency arose, the Southern California companies, which work together on matters of this type, adopted a common service policy and began bidding for public cooperation through regular newspaper advertising, use of bill inserts and other similar media. That campaign quickly overcame any public objections there might have been to necessary reductions in service.

The following points were covered in the educational campaign:

1. It will not be possible to handle anything but urgent emergencies on the same day calls are received.
2. Customers are requested not to ask for night service, on Sundays and holidays, which has formerly been available at any hour.
3. The company will attempt to handle "turn-on" orders the day following receipt of the call unless a later date is requested.
4. "Turn-off" orders, adjustments and other service requests are likely to require a longer time.
5. Customers are requested not to ask for a service appointment at any definite time of day (this allows one call to be grouped with others).

THANK YOU FOR HELPING US SAVE TIRES FOR VICTORY!

A SPECIAL WORD FROM YOUR GAS COMPANY REGARDING WAR-TIME SERVICE CALLS TO HOMES

RECENTLY we announced that war-time restrictions of tires made it necessary to change the handling of gas service calls. And to you who have had reason to require special attention, our sincere thanks for cheerfully cooperating. If you missed our earlier announcement and haven't had occasion to call on us, you may be interested in this necessary adjustment of routine.

First, the change may not affect you or inconvenience you at all. But if you do have occasion to call for service, in the interest of conservation your call must now be combined with others in your district for efficient daily routing. This will help to prevent duplications of trips when one trip can cover an entire neighborhood and save rubber.

For those who are moving we will try to complete "turn-on" orders the day following receipt of the order, unless some later date is requested. "Turn-off" orders, adjustments on your gas appliances and other service calls may require more time. *Only emergencies of the most urgent nature can be taken care of on the same day received.*

In addition the following cooperation will be appreciated:

1. Please do not request an appointment with the service man for a definite time of day (this allows your call to be grouped with others).
2. Please do not ask for any service work to be done at your home after 5 P.M., or on Sundays and holidays.

You can rest assured that your call will be cared for as *soon as possible* under these war-time conditions. And, of course, your Gas Company looks forward to the day when it can resume the prompt service to which you have become accustomed.

SOUTHERN CALIFORNIA GAS COMPANY
SOUTHERN COUNTIES GAS COMPANY

Newspaper advertisement. Original size 3 column, 10 inches high.

Careful Routing By Dispatchers

The public having been sold on the necessity for minor changes and reductions in service, it became possible for the two companies to pre-route orders with the utmost care. Instead of having to order a truck out to a distant point for a single call, the dispatchers were able to begin grouping calls for maximum efficiency.

In the case of routine service such as turn-offs and adjustments, a man isn't sent out until there is enough work in the district to keep him busy for a half day or more. Of course the size of his route in point of mileage covered depends on concentration of population and, to some extent, on the laws of chance. In a thickly populated district, enough routine calls may be received in a single day from an area only five or six blocks square to keep a man busy for a full day. Again, the service man may have to cover several miles to handle a half day's work. There are so many variables involved that no rigid rules could be set up—but in every case lost motion and lost mileage have been reduced to a minimum consistent with essential service.

Here's the picture on elimination of non-request service calls. To make certain that forced air units functioned properly, the Southern California companies had long carried on a regular inspection program covering this type of equipment. Since that service isn't absolutely essential, it has been dropped for the duration—or at least until the rubber shortage is past.

Bicycles And Scooters

When it became evident that even with service cut as far as possible it might be difficult to replace tires, Southern Counties began looking for substitute transportation. Because its territory is widely scattered, this company had a particularly difficult problem.

Bicycles and motor scooters seemed to provide at least a partial answer so test quantities of this equipment were purchased for use in five districts. A total of 102 bikes and 29 scooters were put into service.

The bicycles have worked out quite well and if additional quantities can be obtained, more will be employed. But after a several month test, the scooters have been taken out of service—temporarily at least.

Two factors were responsible for this change. First, automobile traffic hasn't declined to a point where scooter operation is fully safe. The accident record with this equipment wasn't entirely favorable. Second, it

Tool kit back of saddle and basket in front take care of all supplies.

appears that tire replacements for scooters won't be available; this size tire simply isn't being made.

This equipment, however, is being retained for possible future use—in the event automobile traffic drops to where the safety factor is less important and in case tires of this size should become available. The scooters also create an extra reserve of emergency transportation equipment for possible use during air raids or other war conditions which would create a sudden and heavy demand for special service.

The supplementary transportation equipment has been used in most cases by meter readers, collectors and adjusters. Where the territory is such that a man can work out of the main office without having to pedal unreasonable distances, he does that. In other instances, a load of bicycles is taken out on a truck, the truck serving as a sort of base for operations. When the several men have fanned out in the district and completed their work, men and equipment are again loaded on the truck and the "convoy" moves on to a second key spot.

Since adjusters are the only bicycle users who require any equipment and since their tool needs are minor, no problem has been created on this score. The men can carry everything they need right on the bikes.

By confining use of bicycles to jobs and territories where the men don't have to travel excessive distances, the company has avoided any difficulty with employee complaints or excessive use of energy by workers. Most of the men actually seem to enjoy their bicycle riding—and quite a few report that they feel better for the increased exercise.

While a lack of bicycle speedometers—it was impossible to get them—makes it impossible to determine just how much automobile mileage the bicycles have replaced, it is significant that a bicycle tire uses only about 1 per cent of the rubber required for an automobile or light truck tire. The only possible fly in the ointment as far as bicycles are concerned is their scarcity. Southern Counties has placed an additional order but doesn't know as yet whether it will be filled. The accident record with bicycles has been excellent.

Public Transportation Replaces Company Cars

Next important factor in the conservation program has been the substitution—just as far as possible—of public transportation for company car usage. In both companies, company cars were taken away from employees as far as general use is concerned.

Where a car is absolutely required for the specific job—where no public transportation is available for the purpose and the duty is deemed really essential by responsible people—one may be issued for a limited time. But mileage covered is checked carefully to make sure that there has been no excess usage. And, when the one job is finished, the car must be turned in immediately.

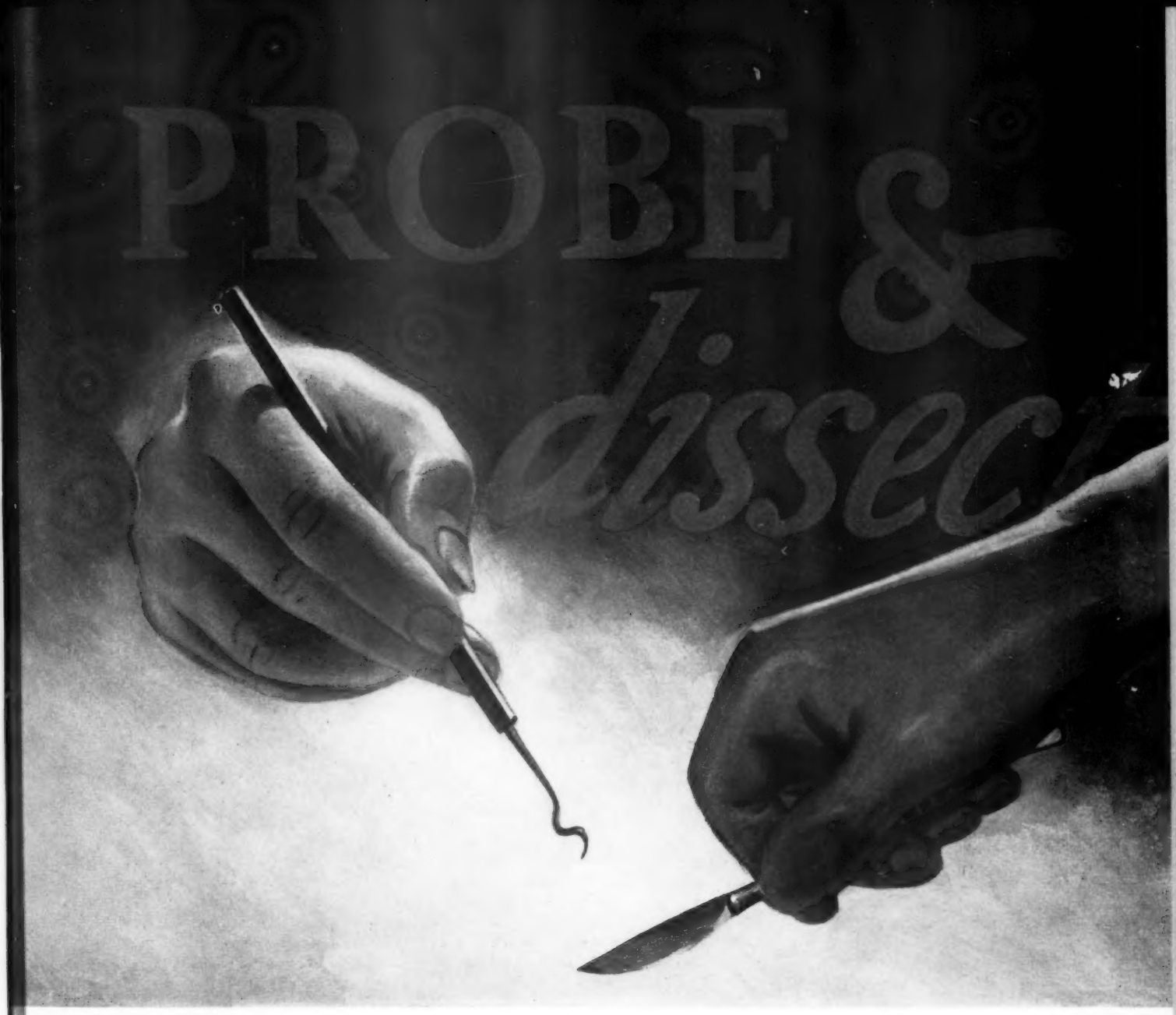
This arrangement is supplemented by a pooling system whereby three or more people use the same car. For example, suppose an engineer, an accountant and a sales department man in the Los Angeles office all needed to make a trip to Santa Barbara or Ventura. If it was shown that a car was needed by one or all those men at the destination, a permit for use would be issued.

Of course there are limitations to the practicability of this setup. If one of three or four men has only a little work to do in the district and the others must remain for some hours or possibly a day or two, the first man would be losing valuable time in waiting. Careful planning and reasonable judgment are necessary in working out the pool system so that it's really productive.

The basic plan involves advance reporting — wherever possible — of trips contemplated. Thus, those in charge of the transportation pool can determine whether or not there will be enough people going to the same place at the same time to justify use of a car.

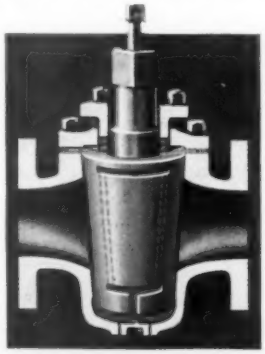
Experience shows that quite often one man can postpone a trip into the territory until there are others ready

(Concluded on page 44)



Do operating costs of ordinary valves *make you wince?*

Uncovering losses in your flow-lines is not always a comforting experience. But probing and dissecting your valve costs may uncover leakages that are costing your company thousands of dollars annually. Take the cost of replacements as an example. If an ordinary valve is giving you, say, only a year of service and then requires repair, or is junked, a Nordstrom Valve in its place may give an extra two, three or more years of service. You could afford to pay two or three times more for a Nordstrom but you don't—because Nordstroms are competitively priced. Plant or department shut-downs for frequent valve replacements are another source of leakage. If you are imposing more load, more pressure or higher temperature, the danger of old valves failing should also be considered. Probe your valve situation. Dissect your valve costs. A successful operation calls for Nordstrom Lubricated Plug Valves.



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***with* NORDSTROM VALVES**

Nordstrom Semi-Steel Valves on Flow Lines, No. 524, Screwed, Size, 4"

Photo by Clarence Lincoln Bloc

You can "always tell a Nordstrom" by its husky looks

A Nordstrom Valve is a rugged "he-man" piece of simple mechanism that can be installed "a hundred miles from nowhere" or right in the heart of your plant, to give satisfactory service forever. Nordstroms are used on lines that run up working pressures to 5000 lbs. Certain types of Nordstroms are imposed with extremely high temperatures. Other Nordstroms, made of special brittle-resistant alloys are used on sub-zero lines. They are giving the highest degree of satisfactory service on gas, air, oil, water, slurry and caustic lines of all sorts, sizes and specifications. If you are looking for valves that will outwear, outlast and outperform any other valves on the market, you'll pick Nordstroms.

Sizes—½" to 30".

Wrench or gear-operated.

Straightway and Multiport.

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Merchrome Coated (to special order)

Semi-Steel, Nordco Steel, Malleable Iron, Stainless Steel, Bronze and Special Alloys.

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A Preliminary Study of the Value of Gasoline for Gas Making Purposes

By

R. W. Stafford

Connelly Iron Sponge & Governor Co.

and

W. H. Ganley

Falley Petroleum Co.,

VARIOUS AGENCIES are doing a great amount of research work in the matter of substitutions for oil in making manufactured gas. This report written by R. W. Stafford, Connelly Iron Sponge & Governor Co., Chicago, with W. H. Ganley, Falley Petroleum Co., Chicago, gives the results of laboratory tests to show the value of gasolene for gas making purposes. It is something to think about in case the oil shortage should get more acute this coming winter. The authors acknowledge the assistance given them by S. J. Modjikowski, Chemical Engineer of the Peoples Gas Light and Coke Co. of Chicago, and L. J. Willien, Gas Engineer, Public Utility Engineering & Service Corp., Chicago.

Upon a direct request from the Chicago Office of Petroleum Co-ordinator, an investigation was started to determine the possibilities of substituting raw gasoline as a gas enricher in place of fuel oils or gas oils. This included cracking tests made in an atmosphere of blue gas. It is our opinion that gasoline if properly handled can be used successfully for gas manufacturing purposes.

We do not recommend the use of gasoline under ordinary circumstances because of the price factor. However, we believe that due to the possible future conditions which may arise in the petroleum industry information relative to the use of gasoline as an enriching agent would be of interest to the operating men of gas utilities.

There has been considerable time and study made of this subject. Present market prices in some areas may prove it economical to use gasoline today. But regardless of the economics the utilities must continue to operate and if no priority set-up is put into effect and gas and oil become unobtainable, a suitable substitute must be found regardless of cost.

The possibilities of marketing gasoline for gas making purposes tax free are being further investigated. It is quite certain that in most of the states which carry a Motor Vehicle Fuel tax, that tax would not be levied when the gasoline is used in a water gas set. The National Authorities at Washington have been contacted for a ruling on the Federal Gasoline tax. At the present time this matter is being given careful consideration by them.

In the near future it is planned to make an actual operating test in a gas plant located in the Middle West for further study of this subject. Results of this test will be made available.

In the use of raw gasoline (untreated and unleaded) instead of the present gas enriching oils, tests indicated that gasoline can be introduced into the top of the carburetor through the present oil sprays. It is suggested that an initial temperature of 1450° F. at the base of the superheater be used. It may be necessary to operate at slightly higher temperatures. The temperature of 1450° F. in the cracking tests shown in the accompanying tabulation does not necessarily mean that it is the proper temperature to use in a water gas machine. In actual gas plant operations it may be necessary to determine the best cracking temperature experimentally.

Gasoline, being more fluid and volatile than gas oils, may leak through joints and connections in the oil line more readily than gas oils. Any gasoline that leaks through a pipe joint or connection will volatilize very quickly, mix with the surrounding air, and may form an explosive mixture. Such a mixture can be readily ignited by flames from the stack valve or from the generator when charging fuel. In using gasoline, therefore, it is essential that all joints and connections in the oil lines be absolutely tight. This can be best accomplished by welding all joints and connections. If a gas oil system includes a small tank in which the oil is repressured with compressed air above the oil in the tank, gasoline should not be used with such an arrangement.

Since most states and cities have established rules and regulations regarding the storage and handling of gasoline, it is essential that the proper authorities be contacted regarding the storage of gasoline in existing gas oil storage tanks. It should be explained to the authorities that the use of gasoline instead of gas oil is an emergency measure for the duration of the war. While the authorities may not insist upon a strict enforcement of the regulations under the conditions, they will probably insist that the storage tanks be equipped with vents. It may also be well to contact the manager of a local gasoline bulk plant in your community to determine what safety devices are needed to safeguard your property.

The data shown covers tests made on raw gasoline as well as other gas enriching agents. In each case cracking tests were made in an atmosphere of blue gas using a small laboratory gas machine. The results obtained should be within 5% of those obtained under normal operating conditions using the oils tested.

The prices used in determining the costs per MCF for purposes of comparison are assumed. However, the necessary factors are shown so that comparisons can be made with your own individual costs.

In brief, when raw gasoline is used for gas making purposes, cracking tests indicate the following:

1. **The heating value contributed to the gas per gallon of gasoline used is higher than that contributed by any of the other products tested except the 40° F. cold test U.G.I. gas oil.**
2. **The per cent of gasoline forming gas is higher than that obtained with any of the other products tested.**
3. **The per cent of gasoline forming tar is lower in comparison to all the other products tested except the 40° F. cold test U.G.I. gas oil.**

GAS ENRICHMENT VALUES OF VARIOUS PETROLEUM PRODUCTS

	STRAIGHT RUN RAW GASOLINE			ZERO GAS OIL			40° F. U.G.I. GAS OIL			STRAIGHT RUN FUEL OIL		
Specific Gravity	.7320			.8309			.8453			.9247		
Baume Gravity	61.3			38.5			35.6			21.4		
BTU per gallon	123,200			140,300			142,000			148,400		
Sulphur Content	0.10			0.30			0.40			0.70		
Conradson Carbon Content				0.01			0.1			8.1		
Method of Determination	Lab Test	Lab Test	Calculated	Lab Test	Lab Test	Calculated	Lab Test	Lab Test	Calculated	Lab Test	Lab Test	Calculated
BTU of Finished Gas	570	545	525	540	537	525	533	536	525	568	573	525
Cracking Temperature, F°	1450°F	1550°		1350°	1400°		1350°	1400°		1525°	1425°	
Per cent forming gas (by wt)	71.5	73.1		66.5	66.7		66.7	63.8		50.9	52.1	
Per cent forming tar (by wt)	10.8	5.7		21.5	18.6		10.2	14.7		26.5	27.1	
Per cent forming carbon (by wt	17.7	21.2		12.0	14.7		23.1	21.5		22.6	20.8	
BTU contributed to gas @ gal.	105,500	105,200		105,000	105,000		110,600	112,800		91,000	95,000	
BTU per cu. ft. of oil gas	1670	1531		1780	1677		2000	2054		1564	1477	
Cu. Ft. oil gas made @ gal. oil	63	68.7		59.1	62.6		54.9	56.5		58.2	64.3	
Per cent of Blue gas	80.6	79.2		83.7	82.8		86.3	86.1		80.2	78.4	
Per cent of Oil gas	19.4	20.8		16.3	17.2		13.7	13.9		19.8	21.6	
Gallons of oil per MCF	3.09	2.78	2.77	2.76	2.75	2.71	2.48	2.46	2.54	3.42	3.38	3.10
* Lbs. of Fuel per MCF	27.4	26.9	28.1	28.4	28.15	28.5	29.3	29.3	29.3	27.27	26.66	27.2
Gallons Tar per MCF	.232	.109	.21	.47	.41	.46	.202	.289	.21	.776	.785	.74
Tar per cent of Oil	7.4			17.0			8.1				.24	
x Net cost of Gas	25.48¢	24.22¢	24.25¢	23.20¢	23.41¢	23.11¢	23.32¢	22.86¢	23.58¢	24.91¢	24.42¢	23.42¢

525 BTU figures are based on figures in 1st column of each item except fuel oil.
x Estimating oil cost 5c @ gal., fuel cost $8.00 @ ton and tar credit 4c @ gal.
* Estimating 34 lbs. fuel producing 285 BTU Blue Gas in making 525 BTU Gas. BTU value of Blue Gas used in laboratory tests approximately 300.

The demands for gas oils and fuel oils not only by utilities but by defense industries have increased tremendously in the past six months. Gas oils for home heating may become hard to obtain this winter in all areas because of the great quanties of this type of material which are now moving East to aid that acute situation. Gasoline rationing for automotive consumption in the Middle West is still only at the conversation stage, but it may be put into effect any time. If that is the case, there will be a strong movement afoot to raise ceilings on fuel oils to make up for loss of revenue which will result from the lack of movement of gasoline. Under such circumstances gasoline may be sold at reduced prices and therefore the day may not be far off when the lowest cost water gas manufactured will be made from gasoline. It is impossible to operate a refinery without producing some quantities of gasoline. If we have rationing in the Middle West, large quantities of this product should be available for gas enriching purposes.

Compare the figures shown with your own operating costs. Learn at what price gasoline can be procured in bulk shipments less Federal and State tax f.o.b. your plant, and apply those figures to those shown in the report to determine its place in your picture today.

Investigations are now being carried on in other parts of the country on this same subject. The authorities in Washington are also studying its possibilities. We feel we should all be prepared for whatever the future may hold.

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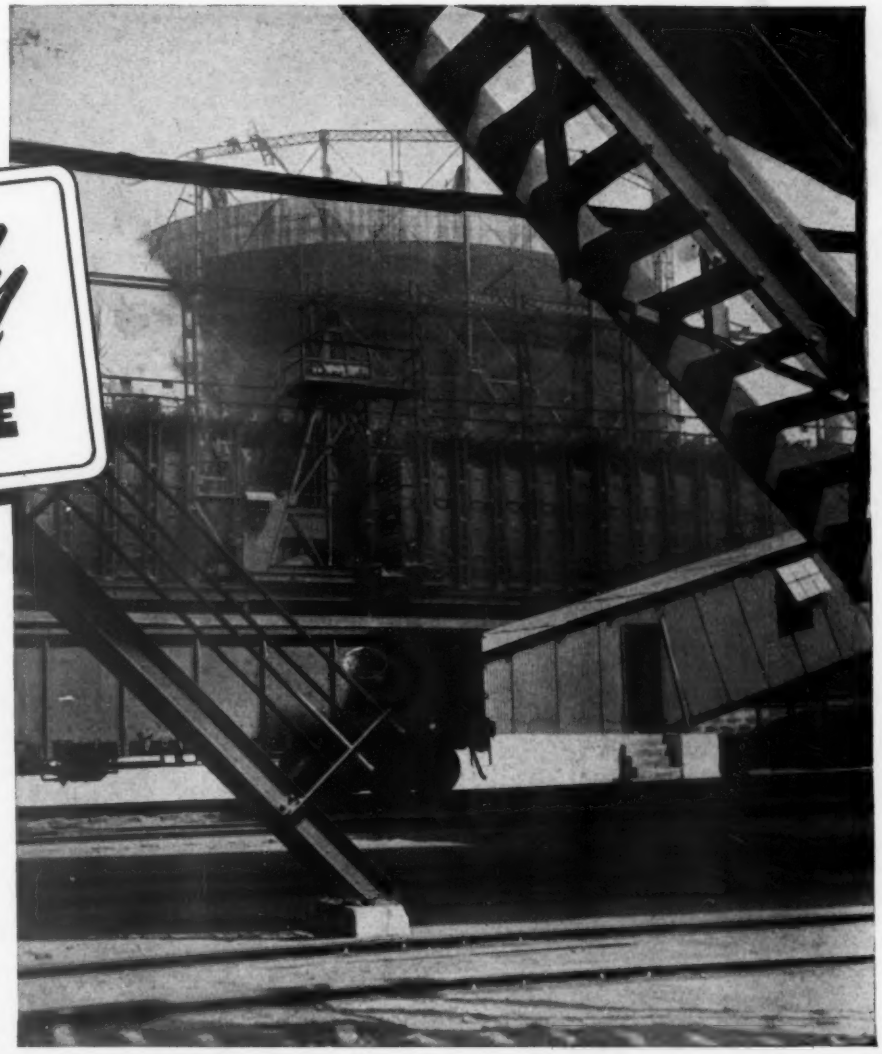

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America can be mighty proud of the job that industry is doing today. It couldn't be done — this business of supplying thousands of tanks and planes and guns — but it IS being done — ahead of schedule.

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One of the important factors in the speed-up of the Gas Industry is the use of Connelly Iron Sponge. In hundreds of plants it is maintaining the efficiency of purifying systems in spite of increased daily loads.

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How Much Power Does a Feed Water Heater Save?

By
W. F. Schaphorst, M. E.
Newark, N. J.

IN TOO MANY PLANTS the feed water heater is a device whose value is not fully appreciated. The idea persists that feed water heaters are "made to sell" mostly, that they are a "theoretical" addition to the plant rather than a practical addition. This statement is commonly found in advertisements, "A feed water heater will save from 10 to 25 per cent of your fuel," and the reader or prospective buyer habitually adds his grain of salt. He has become calloused to statements of this type which frequently are exaggerations when applied to other equipment.

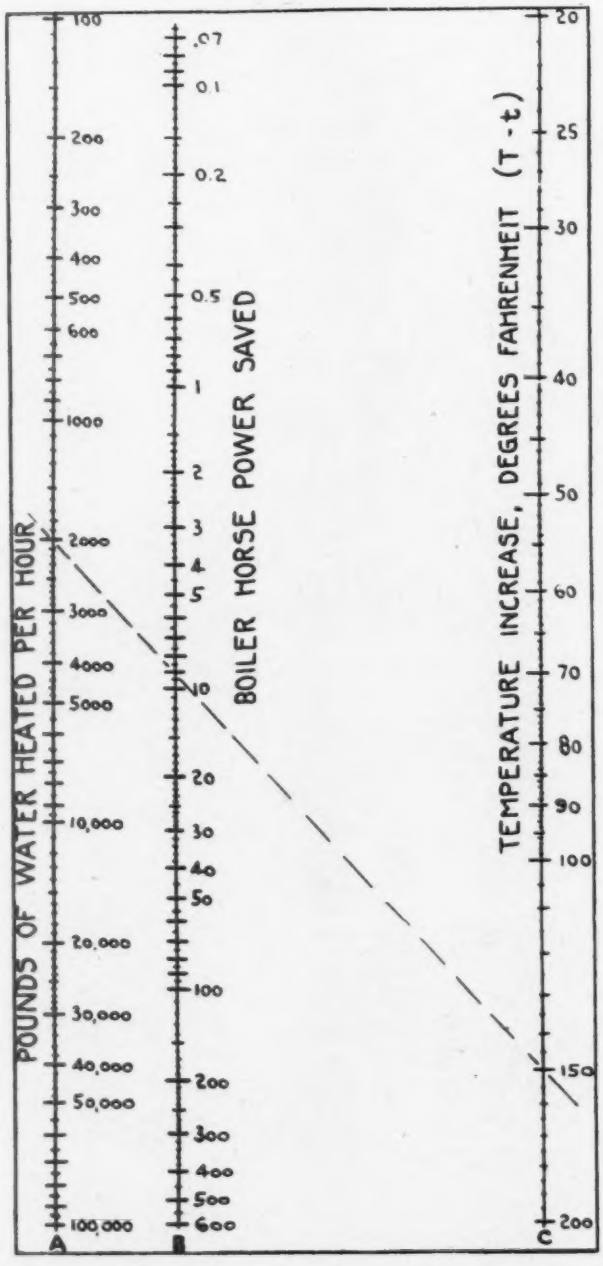
But they are *not* exaggerations when they refer to high grade feed water heaters. So, in order to set any doubting Thomases aright I have developed this chart. Simply lay a straightedge across the chart and column B immediately gives the boiler horse power saved by almost any high grade feed water heater.

For example, if you use 2000 pounds of water per hour and if a feedwater heater will increase the temperature of the feed 150 degrees F., how many boiler horsepower will the heater save?

Connect the 2000 (column A) with the 150 (column C) and column B shows the saving to be 9 boiler horse power, as indicated by the dotted lines drawn across the chart.

In other words, the feed water heater virtually gives you nine boiler horse power for nothing. It utilizes the steam that would otherwise go to waste. Or, if your present boiler is a 60 h.p. unit, and if you add the above heater, you can then get 69 h.p. out of the boiler without burning any more fuel.

Besides, the chart does not show the additional saving due to keeping scale out of the boiler which often amounts to 25 per cent in itself. That, also, should be considered.



The range of the chart, it will be noted, is great enough to handle the conditions in any ordinary small or large plant. 600 h.p. saved is the maximum.

Consumers Organization Effects Change-Over to Natural Gas

There are some 39,000 gas meters in the Flint (Mich.) Division and 4,300 in the Owosso Division of this Company. These serve approximately 105,000 appliances of all kinds including varying makes of kitchen ranges, refrigerators, water heaters, burners, torches and special industrial equipment. Before the new fuel could be used satisfactorily, it was necessary to change and regulate every individual burning appliance on the line.

Two methods of change-over were used. There were certain areas of 5,000 meters or less which could conveniently be isolated, straight natural gas being immediately supplied and service crews completing all adjustments within three or four days.

Such sub-division was impractical in a large district, containing 22,000 meters, in the heart of Flint. Here a mixed gas change-over was made in two steps—the first to 800 B.t.u.'s and the second from 800 to approximately 1,000.

All the territory in the two divisions was divided into nine areas, natural gas being turned on in one after another as the work progressed. After several weeks of preparation the new fuel was supplied to the first area on May 25. Work in the ninth and final unit has just been completed.

Before starting operations a field crew of 280 men had been selected and trained in a special school under actual working conditions. Standard tool kits were provided, and thousands of detailed spare parts and fittings made ready in stockbins. Natural gas was piped to the work room under line pressure for practical shop experience with the new fuel on all kinds of appliances.

Meanwhile an office group was also under instruction in a carefully-planned system of crew operation and customer contacts.

THERE's no Army "A" or Navy "E" to honor the Country's gas companies for the magnificent job you're doing in feeding increased millions of cubic feet of gas to power our war plants and supply our homes.

But, that story's known. And, in millions of minds there are pennants flying that spell

T-H-A-N-K-S
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As for us: Our thanks to the many of you who have let us serve the war effort by letting us serve you.

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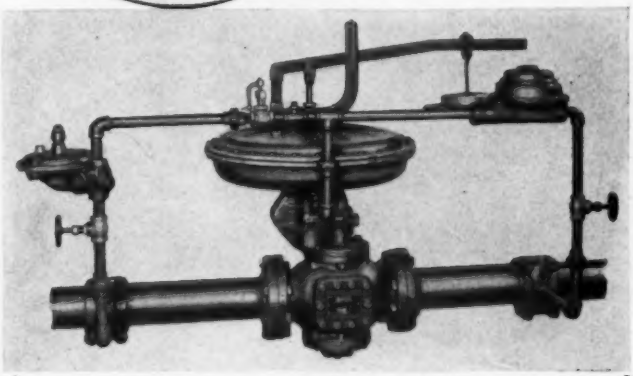
IT'S VERSATILE!

This illustration shows the Regulator as a straight diaphragm operated Regulator.

Below is illustrated the Regulator with Reynolds High and Low Pressure Auxiliary Regulator with needle point valve.



● REYNOLDS New Versatile Regulator can be supplied as a straight diaphragm operated Regulator or with auxiliary regulators for either pounds to pounds or pounds to inches regulation. With the auxiliary Regulators so installed, the Reynolds principle of controlling the main regulator by high and low pressure auxiliary regulator is still maintained. This principle gives the closest and most accurate regulation obtainable.

Adaptability plus versatility feature this new Regulator which is a balanced valve, flanged type with internal toggle levers which give a 12 to 1 lever ratio for operation of the valve. It can be used for pounds to pounds reduction, or pounds to inches or ounces, depending upon the size of the diaphragm case used. Should a customer have either type and want to change to the other, all that would be necessary would be to change the diaphragm cases.

Reynolds Versatile Regulator is manufactured in a range of sizes from 2" through 12". It will reduce pressures to inches W. C., or pounds to pounds. This Regulator can be used where space is limited, making it impossible to use the auxiliary bowl. Let REYNOLDS adapt their new versatile Regulator to your Gas Control System.

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W. D. Fuller Speaks on Inflation

IN AN ADDRESS delivered at the Chautauqua Institute Assembly, Chautauqua, N. Y., on August 7th, Walter D. Fuller, Chairman of the National Association of Manufacturers, stated that blanket increases in wages and salaries, class taxation and favoritism to pressure groups will feed the fires of inflation. Inflation is as much our enemy as Hitler or Hirohito. It is an unseen enemy that creeps up on us. And it is creeping now. There is not a housewife in the nation who needs to be told that inflation has crept into her market basket. She can see it in the price of everything she buys.

"The facts about inflation are clear," continued Mr. Fuller. "In June close to 50 percent of our industrial output consisted of armaments. That leaves 50 percent, or less, manufacturing the things all of us buy—clothing, food, etc. That alone would be inflationary. But more people are at work at higher wages than ever before. Payrolls will increase about 15 billion dollars this year. The American public will have more money to spend and less goods to buy. Since the outbreak of the war in Europe there has been a 17 percent increase in the cost of living. That's inflation at work.

"When blanket wage increases are demanded, that is a demand for a special exemption from the decline in the standard of living—the cost of this war—at the expense of everyone else. Is any group entitled to such an exemption? Isn't this the war of all America? Aren't we all in the same boat, sacrificing alike for victory and ready to share alike in the glory of success?

"In all sincerity I say to you that blanket wage increases no longer are a question of whether or not companies can afford them. Can the people of America afford them? Can labor itself afford them? Can labor afford to pay the price of inflation? Just as the flame lures the moth to her death, so labor is being drawn toward disaster by the magnetism of blanket wage increases."

Denying recurring rumors of unconscionable profiteering in some war industries, Mr. Fuller cited the House Naval Affairs Committee's recent study of 39,405 war contracts and its finding that "95 percent of war contractors are doing an honest and effective job and receiving only fair and reasonable profits." The Committee pointed out that even among the other five percent, "many of the contractors have voluntarily reduced their profits when the situation was called to their attention either by direct refunds or price reductions on future deliveries."

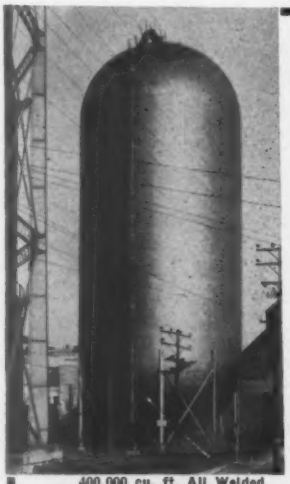
"So, there were not five percent who were wilfully profiteering" continued Mr. Fuller. "I doubt if one percent, or even a fraction of one percent were maliciously fattening their bank accounts at the country's expense. All such should be stopped of course. My point is that we should not damn the efforts of the 99 percent for the one percent, or less, who may be rats.

"In the months that we have been at war I have sat in many meetings of businessmen," said Mr. Fuller, "and I can tell you that the concern of management today is not with profits. Profits have been largely forgotten for the duration. But the concern of management today is with reserves. It would be only half a victory to win this war and then find ourselves so weakened by inflation or unwise taxation that business could not finance the transition to peace. Business and industry must remain strong so as to be in a position to re-employ men and women in peaceful pursuits. Machinery to build automobiles and washers and a thousand other things again will cost money — plenty of money. It will be expensive to rebuild markets and reopen the channels of distribution.

"Businessmen are fearful that inflation will wipe out the reserves of our nation — the precious reserves upon which our standard of living must be rebuilt. Such inflation would be disaster to our nation second only to a defeat by the Nazis. The world's recovery from these dark days might be delayed a hundred years. . . .

"If the reserves of business are swept away by inflation—if the reserves of the people of America are destroyed by inflation—then where is the money coming from to buy the fruits of peace—to provide wide employment, high payrolls and an improved standard of living for all? If you think government can pull a rabbit out of a hat and do the job, you're due for disappointment. Government does not create rabbits, or hats or money. It can legislate to rob Peter to pay Paul or soak the rich but not to create something out of nothing. And there will be practically nothing if the corporations and the people of America are unable to pay taxes.

"Remember we can win all the other battles in this crisis and be defeated by inflation."



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Arc Welding Salvages Machines Subjected to Hard Wear in Gas Producing Plants

SURFACES of crushers, coke screens, gas producers and driving gear, which receive terrific wear in the routine of gas and coke production, are being salvaged by arc welding.

Welding is eliminating the necessity for replacing many parts of gas plant machines and is reducing maintenance cost very appreciably.

Application of this form of welding was described by engineers of The Lincoln Electric Company of Cleveland, Ohio. Two types of electrodes are used, "Ferroweld" and "Abrasoweld."

Fig. 1 shows how the worn flights of a grate section from a gas producer may be reconstructed by these two types. To serve as a foundation for further deposits of metal, the first layer was built up with "Ferroweld." This was covered by "Abrasoweld." Even after a year of service the welded portion of the grate showed very little wear.

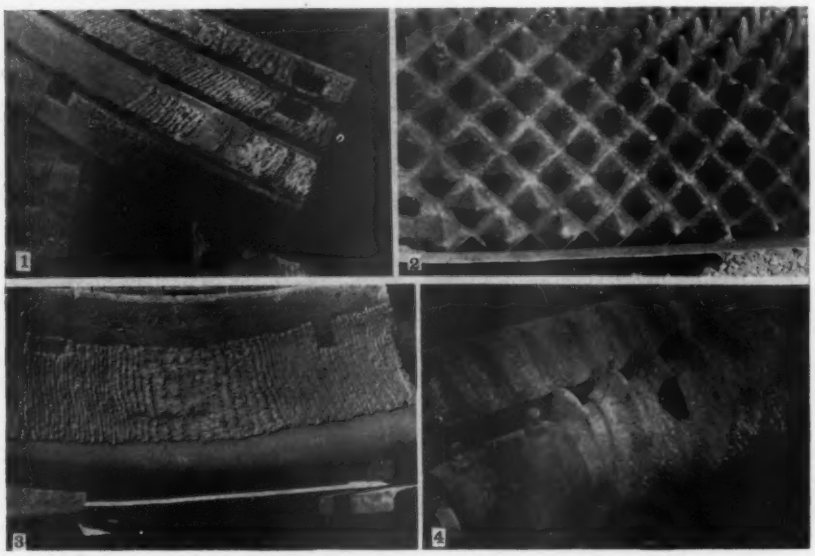

Fig. 1—Worn flights from a section of gas producer grate, showing reconstruction with arc welding.

Fig. 2—Teeth of a cast iron segment of a coke crusher built up with "Abrasoweld."

Fig. 3—Reconstruction of the worn surface of a cast steel skirt for a gas producer.

Fig. 4—Cast steel worm re-surfaced with one layer of "Abrasoweld" after the worm had worn to a point where it formerly would be discarded.

Probably no machine in a coal gas plant receives greater punishment than a coke crusher. Its teeth must stand hard impact as well as abrasion. But its teeth likewise can be built up. Fig. 2 shows how this was done. The material of the crusher was cast iron.

Likewise, coke screen cloth, worn down in a similar manner, may be reconstructed. If this repair is made without removing the cloth from the shaker screen and before the original rods are worn half over, no trouble is experienced from breakage.

Fig. 3 shows a cast steel skirt from a gas producer which has been rebuilt. These skirts are 1½ inches thick when new, and to avoid mechanical failure, they must not be allowed to wear thinner than ½ inch. The wear is most severe in the middle portion. There are eight of these sections in each gas producer, and to replace them would entail considerable expense.

It is estimated that the original cost of a section of the cast steel skirt is $97.44, while the usual cost of welding is $10.20.

Fig. 4 shows a gear and worm worn so badly they ordinarily would have been discarded, but were salvaged by surfacing. It is estimated that a new worm installed on a shaft would cost $75, while the cost of welding amounted to $25.50.

The original cost of the gear is $600. Its teeth were re-surfaced when they had been worn to a point where replacement seemed to be necessary. The teeth were rebuilt at a cost of $93.50 without entailing the removal of the gear from its shaft.

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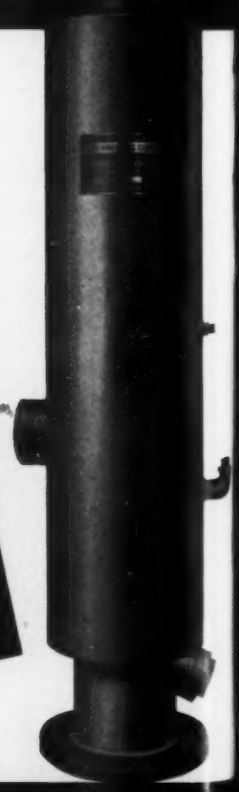


BLAW-KNOX GAS CLEANERS

War Production Board

Office of War Information

Order L-172 Heat Exchangers

Heat exchangers, urgently needed in war industries and by the Army, Navy and Maritime Commission, were placed under a system of complete allocations August 5th by order of the Director General for Operations.

Heat exchangers are used to exchange heats between liquids and gasses in industrial, Army and Navy and maritime work. Requirements of the war program have put a severe strain on existing supplies, since they use considerable quantities of scarce metals.

The order (L-172) prohibits the placing or acceptance of orders for heat exchangers covered by the regulations unless specific authorization is granted by the Director General on Form PD-615A. Application for authorization to place orders must be made on Form PD-615.

Manufacturers with whom orders authorized by the Director General are placed must accept such orders, unless the person seeking to place the order is unwilling or unable to meet regularly established prices and terms of sale or payment.

In addition, regardless of any prior commitment or preference rating, manufacturers are prohibited, beginning 15 days after the date of the order's issuance, from delivering any heat exchangers unless authorized by the Director General under a set procedure involving the filing of reports by manufacturers showing heat exchangers available for distribution and orders on hand.

Heat exchangers listed in manufacturers' reports as scheduled for delivery on or before August 31 may be delivered without specific authorization after WPB has received the reports. However, the Director General may revoke such automatic authorization at any time.

In order to obtain permission to make delivery of heat exchangers not scheduled for delivery before August 31, manufacturers must file application on Form PD-615B on or before the 25th day of each month.

During the next 30 days, the Army, Navy and Maritime Commission and War Shipping Administration will be exempt from the terms of the order.

Plumbing Heating and Cooking Equipment Order L-79

Two amendments to Limitation Order L-79, covering certain plumbing, heating and cooking equipment, were issued Aug. 11th by the War Production Board.

The first amendment includes in the terms of the order cooking and baking equipment using coal, oil or gas. Previously, only those types of cooking or baking equipment connected to gas or steam systems were covered.

The other amendment includes the following gas-burning heating equipment in the terms of the order: steam and hot water heating boilers, warm air furnaces, floor furnaces, unit heaters, conversion burners, and gas steam radiators.

Order L-79 provides that "no person shall sell or deliver" any equipment covered by the order to an ultimate consumer, except that:

Cooking stoves, heating stoves and water heaters may be sold to householders where no other equipment for cooking or heating purposes is available.

The sale of any equipment needed to convert oil and gas burners to coal is permitted.

No restrictions are placed on sales amounting to $5 or less, provided such sales are part of an order totalling no more than $10.

Sale and delivery is permitted of any equipment on an A-10 or better preference rating. (Preference Rating Order P-84 assigns such a rating for repair and maintenance purposes.)

Sale and delivery of any equipment specifically designed for hospitals, or for surgical, veterinary, barber shop or beauty shop use is permitted.

Sale and delivery of any equipment is permitted if the purchaser certified that it is needed to complete a project authorized by WPB in accordance with Construction Order L-41.

Sale and delivery is permitted on the specific authorization of WPB.

An additional exception, which permitted the sale of oil burners when such transactions were made for the purpose of reducing consumption of fuel oil, is revoked by one of the amendments announced recently (Amendment No. 2).

Industrial baking ovens and other types of industrial baking machinery are not covered by the terms of the amended order, since they are regulated by General Limitation Order L-83.

Issuance of Amendment No. 1 to Preference Rating Order P-84, providing for preference rating assistance in connection with repair and maintenance of cooking and baking equipment, was also announced by WPB.

Motor Replacement Parts

In a move to expedite production of replacement parts to keep the country's motorized equipment in good running order for the duration of the war, the War Production Board has ruled that producers may schedule production of replacement parts without regard to purchase orders or contracts placed with them for other material on ratings lower than A-1-a.

Amendment No. 1 to Limitation Order L-158 authorizes producers to schedule production of essential replacement parts ahead of all other orders rated lower than A-1-a.

The amendment makes certain other changes in the replacement parts order. One of these is merely a modification of the definition of a truck trailer to make it clear that the definition applies to passenger trailers.

Another change revises the section of the order which provides that consumers must turn in a used part for every new part purchased.

Under this change, a producer or distributor may sell and deliver any replacement part to a consumer without receiving a used part in exchange, provided that the part involved is not installed in the consumer's vehicle by the producer or distributor from whom it was purchased, and the consumer signs a statement certifying that he will use the new part for replacement purposes only and will, within thirty days after purchasing it, dispose of his used part through regular scrap channels. The use of the certificate does not apply to parts consumed in use or lost or stolen Such parts are exempt from the turn-in regulations.

This provision is intended to relieve consumers who are in a position to repair their own vehicles and do not wish to have the vehicles torn down at a repair shop. The amendment also exempts Federal, State and local governments from the turn-in rule, provided they are forbidden

by law from disposing of used equipment. Issued August 3rd, 1942.

Part 1001—Tin
M-43-a, Amendment 1

Paragraph (b) (2) (iii) of §1001.2 is hereby amended to read as follows:

(iii) Manufacture or use any solder having a tin content of more than 30% of weight provided that:

(*a*) Solder having a tin content of not more than 40% of weight may be manufactured or used for the repair of gas meters;

(*b*) Until September 1, 1942, wiping solder having a tin content of not more than 38% by weight may be manufactured or used;

(*c*) From September 1, 1942, until January 1, 1943, wiping solder having a tin content of not more than 38% by weight may be manufactured or used for the installation or repair of lead water service pipes operated by a public utility.

Issued this 3d day of August 1942.

Domestic Space Heaters, Order L-173

The War Production Board Aug. 5th issued Limitation Order L-173, cutting off further production of domestic space heaters calling for the use of fuel oil or gas except to fill orders for the Army, Navy, Coast Guard, Maritime Commission or War Shipping Administration.

Types of heaters covered by the order are those designed to heat only the space in which they are located and which are not equipped with distribution pipes. Included are circulating heaters, radiant heaters, direct fired gas unit heaters, and floor and wall furnaces.

The order permits the production of replacement parts so that units now in operation can be kept serviceable.

Iron, Steel Plate Restricted To A-1-k

Deliveries of iron and steel plates have been restricted to ratings of A-1-k or higher, with certain exceptions, by the Director General for Operations. The action was taken in an amendment to M-21-c.

Exceptions are made for deliveries by warehouses for maintenance and repair purposes; for "special sales" to designated classes of buyers, as authorized by Priorities Regulation 13; and with special authorization of the Director General.

Typewriter Production to Cease October 31, Except Few for War

Manufacture of typewriters will be stopped completely on October 31, except for a relatively small number to be produced for Government agencies by the Woodstock Typewriter Co., under the terms of an order, L-54-a as amended, issued August 4 by the Director General for Operations.

The sizes, kinds, and types of typewriters to be produced by the Woodstock Co. will be subject to orders which may be issued from time to time by the Director General for Operations in order to meet special needs of the armed services.

The amended order continues in effect complete allocation control over new typewriters, all of which are reserved for the Army, Navy, and Maritime Commission. The major companies are assigned a quota of sets of parts for export which may be produced up to October 31 on the same percentage basis as their production of new nonportable typewriters.

Power Expansion Program

The War Production Board announced August 22d the issuance of a series of orders to effect a readjustment of the power expansion program.

The orders involve extensive revision of existing priority ratings on public and private power projects throughout the country. All utility projects which are regarded as urgently necessary in the war program have been assigned higher priorities in order to assure their completion on schedule. In the case of the remaining projects, action has been taken so that they will not compete with immediate military requirements for critical materials and equipment, particularly equipment needed for the Navy and merchant ship programs, and copper and steel. This has meant the halting of some projects and continuance of another group only to the extent possible on low ratings.

In the program of projects to be assured completion 5,500,000 KW of new capacity are provided for the remainder of 1942, 1943 and to a limited extent, early in 1944. Of this amount, 3,400,000 KW is private and 2,100,000 KW public.

REED'S 4 WHEEL
Razor Blade Pipe Cutters

IDEAL FOR ANY TRENCH OR OTHER CLOSE QUARTER JOBS

$5.46 F. O. B. ERIE

Capacity
½" to 2"
Weight 5 lbs.

The REED FOUR WHEEL Cutter operates with a short back and forth motion through only one-third of a circle. Each of the four wheels exerts the same pressure on the pipe, and all 4 therefore cut evenly and completely through the pipe at the same time.

Equipped with Reed special alloy RAZOR BLADE Wheels, which cut with remarkable ease, leave little burr, and have a long life of useful service.

A sample cutter for test and trial may be ordered on memorandum invoice, to be paid for if retained or returned for credit if unsatisfactory. Try it once, and you will use no other.

REED MFG. COMPANY
1436 W. 8th Street • ERIE, PA.

Work on projects totaling 2,200,000 KW, scheduled for operation in 1943 and 1944, is being stopped. Of this amount, 355,000 KW represents capacity on which priorities are being suspended subject to reinstatement in the future should changing power requirements dictate such action.

In conjunction with existing power installations, the projects which have been given the higher priorities are designed to assure supply for war and indirect war production as now planned with a small margin of capacity to provide for possible additional war production not included in the munitions program as now projected. It has been necessary to hold this margin to the minimum and the risks involved in such action represent the price that must be paid for releasing materials needed immediately for direct military uses.

Because such a large part of the war program is now definitely planned for, it is feasible to plan for the electric capacity with more precision than has heretofore been possible. At the same time, it was emphasized that the reduction in the utility expansion program has substantially enhanced the probability of widespread curtailment in the use of electricity for civilian purposes, especially during 1943 and thereafter. It was explained that the necessity for diverting critical materials and equipment to the direct war program makes it impossible to carry out a utility expansion program that would preserve the standards of reliability of service observed in peacetimes, that civilian inconvenience and sacrifice must be expected, particularly during periods of drought or other adverse weather conditions, or in the event of serious accidents affecting utility systems, or in case of unexpected large increases in power requirements for war production.

The Federal projects and the projects on which priorities are being suspended are designed to provide a margin of potential source of power supply that can be brought into operation speedily to relieve later power deficiencies. A close check is being maintained continuously by the War Production Board on power supply and requirements in order that action may be taken as promptly as possible to reinstate or speed up these projects or initiate new ones as needs arise.

Liquefied Petroleum Gas Equipment

Amendment to Order L-86

In order to permit petroleum producers who are also liquefied petroleum gas operators or users to obtain priority assistance in securing materials for maintenance and repair of liquefied gas equipment, Limitation Order L-86 has been amended to allow them to make use of the preference ratings extended to the petroleum industry by Preference Rating Order P-98.

The amendment, announced August 15th, corrects a situation which existed as a result of provisions in L-86 and Preference Rating Order P-98, which excluded those firms engaged in both types of operation from any assistance under the several repair and maintenance orders.

The amendment also provides for the use of a new form, PD-397, Revised, in applying for exceptions under L-86.

Where unvarying low pressure is required

As a district regulator — at distributing or measuring stations — in industrial plants, institutions and housing projects — wherever low pressure gas is consumed in considerable volume, the C-F Low Pressure Regulator gives perfect control. Any inlet pressure up to 100 pounds can be reduced to a constant delivery pressure from 2 to 16 ounces. Fully balanced valve with soft-seat construction for positive shut-off. Inside valve may be removed for inspection without taking regulator from line. Furnished with or without automatic cut-off, a safety feature which closes regulator when line pressure fails, and must be reopened manually. For domestic service or other installations requiring less volume, the C-F House Regulator is unequalled in performance or durability, reducing line pressures as high as 500 pounds to delivery pressures in ounces. There's a C-F regulator for every requirement in the control of either high or low pressures. Specific recommendations will be made on request.

*

THE CHAPLIN-FULTON MFG. CO.

38 PENN AVE. PITTSBURGH, PA.

Manufactured Gas Limitation
Order L–174

Delivery of manufactured gas to new industrial and domestic consumers is restricted by the War Production Board in an order L-174, issued August 25th, designed to cope with gas shortages expected this winter.

The order is a companion to order L-31, affecting natural and mixed gas, which was issued in February, 1942.

After September 1, 1942, no gas may be delivered to a non-residential consumer for the operation of any gas-fired equipment which was not operated either by the consumer or on the same premises prior to that date, unless (a) the capacity of the new equipment is less than 150 cubic feet per hour, or (b) the new equipment replaces existing gas-fuel equipment of the same or greater capacity, or (c) the Director General for Operations of WPB grants approval for the delivery of gas for the new equipment.

After September 1 no gas may be delivered for space heating (such as heating a home, store, office, or factory) unless:

1. The equipment was installed prior to September 1. If the equipment was converted from some other fuel to gas, the conversion must have been completed by September 1.

2. The equipment replaces gas-fuel equipment of the same or greater capacity.

3. In the case of a new building, deliveries may be made to gas equipment installed prior to November 15, 1942, provided such gas equipment was specified in the construction contract and the foundation of the structure was completed prior to September 1, 1942.

Any person who thinks that the curtailment or prohibition of gas deliveries provided by the order will interfere with war production or essential civilian services may apply for relief to WPB. All communications should be addressed to the Power Branch, War Production Board, Washington, D. C., Ref. L-174.

Any utility which feels that its capacity as well as its fuel supply are sufficient to take care of all existing as well as estimated future requirements of war industry and unrestricted civilian use, may apply to WPB for exemption from the provisions of this order.

In addition to restrictions on new deliveries, the order requires gas companies to operate their systems in such a way as to obtain maximum output of gas in any area in which a gas shortage exists or is threatened. Each utility must investigate the availability of gas production facilities owned or operated by a non-utility producer in the area and arrange for the use of such facilities when needed.

Upon notice by WPB that a shortage exists or is imminent, a non-operating utility interconnected with a utility system is required to make its excess capacity available to the utility system.

When a gas shortage occurs and it is necessary to reduce deliveries of gas, the utility serving the shortage area is required to curtail consumers in the following sequence:

(1) All consumers served under contracts providing that the utility shall have the privilege of interruption, except war producers and essential civilian services not having standby facilities.

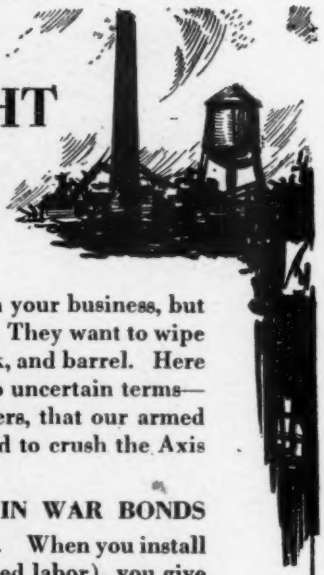
(2) All consumers having standby facilities, without respect to contractual rights of interruption.

(3) All other consumers, except certain war industries and essential civilian services which are listed in an exhibit attached to the Order.

(Concluded on page 44)

TARGET FOR TONIGHT

. . . Your Business?



Maybe they won't actually come and drop a *bomb* on your business, but the Axis war lords have their eye on it, just the same. They want to wipe it out as a competitive force—or take it over lock, stock, and barrel. Here is a threat that you can reply to *now*, today, and in no uncertain terms—by buying War Bonds to the very limit of your powers, that our armed forces may have the guns, tanks, and planes they need to crush the Axis *once and for all.*

THE GOAL: 10% OF EVERYONE'S INCOME IN WAR BONDS

Every American wants the chance to help win this war. When you install the Pay-Roll War Savings Plan (approved by organized labor), you give your employees that chance. For details of the plan, which provides for the systematic purchase of War Bonds by voluntary pay-roll allotments, write: Treasury Department, Section S, 709 12th St. NW., Washington, D. C.

Buy War Savings Bonds

This space is a contribution to America's All-Out War Program by

Gas Purifying Materials Co., Long Island City, N. Y.

New Procedures for Applying High Ratings Announced, AA Series Changed, AA-2X Added

New procedures for applying the high preference ratings assigned under the terms of Priorities Regulation No. 12 are provided by a complete revision of the regulation announced August 11 by the Director General for Operations.

AA Series Adjusted

At the same time, Priorities Regulation No. 1 has been amended to change the order of ratings in the AA series. Hereafter, all AA-1 and AA-2 ratings are to be treated as the same; neither will take precedence over the other. A new rating, AA-2X, is created which will be lower than the AA-1 or AA-2 rating, higher than AA-3.

The purpose of this change is to raise all outstanding AA-2 ratings to the AA-1 level without rerating them individually, and to provide a new rating which will correspond hereafter to the AA-2 level. When provision for reratings was first made all outstanding AA ratings issued before that time were automatically changed to AA-2. The August 11 amendment has the effect of rasing them to AA-1.

Principal Changes Effected

The most important changes effected by Regulation No. 12 as amended are as follows:

1. Permission to extend reratings to obtain operating supplies up to 10 per cent of the value of materials processed to fill a rerated order is now granted to all companies whose orders are rerated, subject to restrictions identical with those already imposed by Priorities Regulation No. 3.

2. Provisions for extending reratings to suppliers have been simplified. The new higher ratings may now be applied to outstanding purchase orders for material to fill the rerated order by telegram, letter, or by issuance of new purchase orders with the higher ratings, as well as by use of PD-4Y certificates.

3. Rerating directions in the PD-4X series may now be used by officials of the Armed Services not only to rerate orders which have been placed with prime contractors, but also on orders to subcontractors which have previously been rated by the Armed Services.

4. The provision regarding the effect of a rerating on a production schedule has been modified to eliminate the distinction between a "fixed production schedule" and a "production schedule." The regulation now provides simply that no company receiving a rerating is required to interrupt its production schedule for 40 days if such interruption would cause a substantial loss in production.

5. An entirely new procedure is provided for application of reratings by companies operating under the Production Requirements Plan. Chief feature of the new procedure is that a PRP unit (a company under PRP) may, not oftener than twice a month, revise the rating pattern of its outstanding purchase orders in accordance with reratings it has received.

This means that if a PRP unit which is filling a certain volume of A-1-a orders has 50 percent of these orders raised to AA-1, it may without further authorization raise to AA-1 the ratings on 50 per cent of the purchase orders it has placed for materials to fill these rated orders.

Office of Price Administration

Part 1340—Fuel

Amendment 4 to Maximum Price Regulation 121

Miscellaneous Solid Fuels Delivered From Producing Facilities

A statement of the considerations involved in the issuance of this amendment has been issued simultaneously herewith and filed with the Division of the Federal Register.

Paragraph (a) is amended and a new paragraph (d) is added to 1340.245 to read as set forth below:

1340.245. *Records and reports.* (a) On and after May 18, 1942, every producer and distributor making a sale of any miscellaneous solid fuel and every person making a purchase of miscellaneous solid fuels from a producer or distributor in the course of trade or business shall keep for inspection by the Office of Price Administration for a period of not less than two years complete and accurate records of each such sale or purchase, showing the date thereof; the name and address of the buyer and seller; the size, kind, quality, brand or trade name and quantity of the solid fuel sold, together with the name of the mine or plant at which it originated, the method of transportation employed in the delivery thereof; and the price paid or received therefor.

(d) Persons subject to this Maximum Price Regulation No. 121 shall not be required to observe the provisions of paragraph (b) of 1499.13 of the General Maximum Price Regulation.

1340.250a *Effective dates of amendments.* * * *

(d) Amendment No. 4 (1340.245) (a) and (d) shall become effective August 5, 1942. (Pub. Law 421, 77th Cong.) *Issued this 1st day of August 1942.*

Petroleum and Petroleum Products

Amendment 25 to Revised Price Schedule 88

A statement of the considerations involved in the issuance of this amendment has been issued simultaneously herewith and has been filed with the Division of the Federal Register.

Sections 1340.155 (a) and 1340.157 (a) are amended and a new 1340-155a is added as set forth below:

1340.155 *Enforcement.* (a) Persons violating any provision of this Revised Price Schedule No. 88 are subject to the criminal penalties, civil enforcement actions, license suspension proceedings and suits for treble damages provided for by the Emergency Price Control Act of 1942.

1340.155a *Licensing; applicability of the registration and licensing provisions of the General Maximum Price Regulation.* The registration and licensing provisions of 1499.15 and 1499.16 of the General Maximum Price Regulation are applicable to every person subject to this Revised Price Schedule No. 88 selling at wholesale or retail any petroleum or petroleum products covered by this Revised Price Schedule No. 88. When used in this section the terms "selling at wholesale" and "selling at retail" have the definitions given them by 1499.20 (p) and 1499.20 (o) respectively of the General Maximum Price Regulation. Said registration and licensing provisions became effective as to persons selling at wholesale on May 11, 1942, and as to persons selling at retail on May 18, 1942.

1340.157 *Definitions.* When used in Price Schedule No. 88 (1340.155 and 1340.159, inclusive) the term:

(Concluded on page 44)

Fast Work on Dallas Break*

EARLY on Monday morning, July 6, the dispatcher at Dallas Junction watched the pointer on the Latex-Fort Worth and Dallas main line gauge start slowly downward as the regular morning withdrawals from the industries and homes in the two latter cities started.

At first he was not alarmed, but as the needle continued to record lower pressures he called the dispatcher at Shreveport, reporting the condition. Here too, the impression was that a peak load was being drawn from the lines by the industries and at the city gates of the two big cities. Within a few seconds, however, all doubt that there was a line break was dispelled as pressure at Dallas Junction dropped still farther.

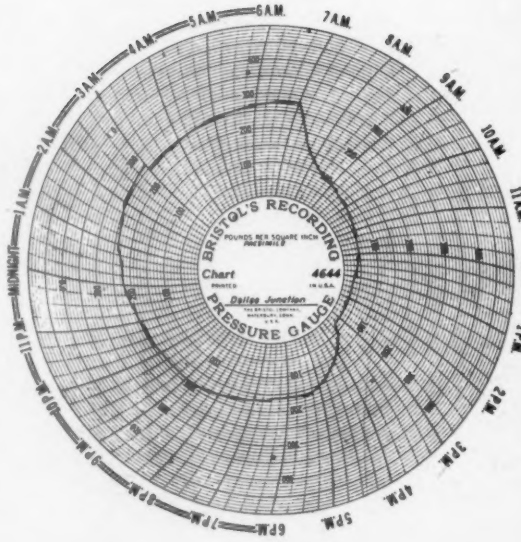
Maintenance crews swung into action immediately. It was known that the break was between Mineola and Dallas because of the action of the check meters. So crews from Mineola started westward and the crew from Dallas started east down the line. There were enough men in the two crews to cover the line in five mile sections between Mineola and Dallas Junction quickly.

The break, a three-foot split in the pipe, was located at Milepost 135.5, approximately 33 miles east of Dallas and at 10:10 a. m. the crews had arrived and started digging bell holes. The welder began cutting out the damaged section of pipe at 11:40 a. m. A replacement section of pipe arrived from Mineola at 11:55 and at 12:20 it was in place, two Dresser couplings being used to make the tie.

At 12:35 the dispatchers were notified that the line was ready to be purged. As soon as the tie had been completed the replacement section was coated with service cement, wrapped with pipeline felt and backfilled, the entire job with the exception of the purge being completed by 12:25 p. m.

The Dallas crew was under the direction of Section Foreman, C. A. Stewart, who was assisted by Section Foreman W. W. Bennett, and the Mineola crew in locating the break. Total time elapsing between the arrival of the crew at the break and backfilling totaled 75 minutes.

Especial commendation is due the Dallas Dispatcher, who, instead of depending on hourly checks of the gauges was watching carefully and thus was able to make a quick report of the condition.



The adjoining chart was copied from that at Dallas Junction which recorded the break. Note start of break at 7 a.m., subsequent drop, and then the upbuilding of pressure starting about 3:20 p.m. after the line had been repaired and purged. Notice also the drop at noon when midday load started to pull on reserve in line.

* July issue "United Gas Log."

THE M-SCOPE PIPE FINDER

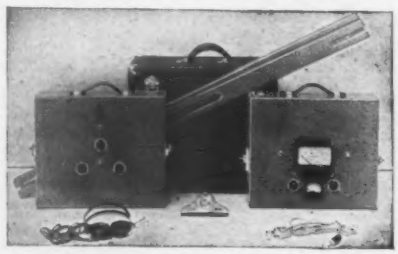
Gives Accurate and Speedy Location of Mains, Dead Ends, Valves, Manholes and Drip Boxes. Gives both direction and depth.

Eliminates Exploratory Excavations.

Locates illegal or unauthorized connections.

Avoids accidental damage to other unknown lines in the path of trench diggers.

Checks existing records and surveys unmapped territory.



The M-Scope consists of two specially designed radio units: A transmitter and a receiver. In operation, the transmitter sends out a continuous signal, and when there is no metal interposed between the two units, a definite volume of sound is heard in the earphones of the receiver. A meter mounted on the receiver gives a definite reading. If a metal object lies between the two units, the sound heard in the earphones will be louder and meter reading higher.

Complete M-Scope equipment includes transmitter, receiver, earphones, spirit level, and conductive wire with clips along with carrying case.

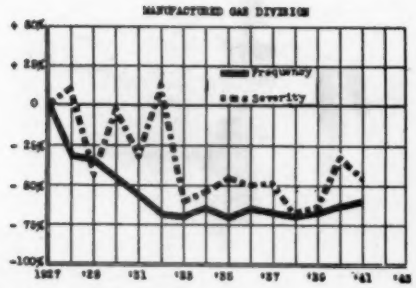
Hundreds of Gas Companies and other utilities now use the M-Scope. Complete details with illustrations in Bulletin 6. Send for it.

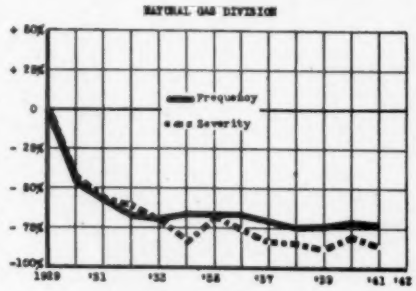
Joseph G. Pollard Co. Inc.

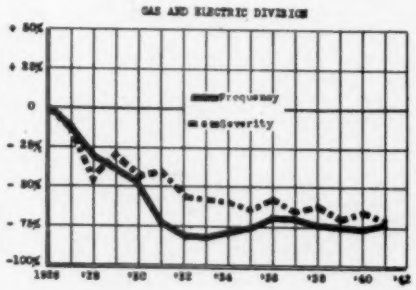
Pipe Line Equipment

152 Ashland Place **Brooklyn, N. Y.**

Accidents in the Utility Industry







The National Safety Council, Chicago, Ill., recently issued its annual statistical report on accidents in the gas and electric utility industries.

The charts shown cover the manufactured gas division, natural gas division and the combined gas and electric division.

It states: "Another important factor was the reduction in the frequency of fatalities. Better experience with this type of injury is especially noteworthy because time charges for deaths are a very large proportion of the total days lost time; the industry's fatality rate is high; and least improvement has been made in preventing such injuries.

"While utilities had better-than-average 1941 frequency rates, severity rates were higher than for most industries. The relatively high rates for combination gas and electrical companies and straight electrical companies more than offset the lower rates of gas, and telephone and telegraph companies.

"The principal safety problem is preventing fatalities in electrical operations. The frequency of these injuries in electrical utilities is about twice the rate of gas companies. During the past five years one in 40 reportable injuries was a fatality in comparison with one in 132 for gas companies and one in 98 for all industries. Furthermore, about 85 per cent of all lost time resulting from injuries of all types in electrical utilities was charged to deaths."

The table shows the injury rates and severity of injuries in the various utility groups.

Injury Rates and Severity of Injuries, by Industrial Groups

Industrial Group	No. of Units	Frequency Rate		Severity Rate		Ratio of Lost Time Injuries, 1937-41, Resulting in —		Average Time Charge per case, 1937-41	
		1941 Rate	1940-41 Change	1941 Rate	1940-41 Change	Death	Permanent Partial Dis.	Permanent Partial Dis.	Temporary Total Dis.
ALL GROUPS*	696	12.53	+7%	1.54	-11%	1 in 53	1 in 57	795	19
Gas and Electric	49	9.15	+7%	1.71	-14%	1 in 33	1 in 41	1,080	22
Electrical	203	12.15	+7%	1.83	- 2%	1 in 40	1 in 61	883	21
Natural Gas**	182	13.56	- 3%	.82	-28%	1 in 132	1 in 58	677	18
Manufactured Gas**	240	14.23	+10%	1.05	-25%	1 in 132	1 in 47	429	15
Telephone and telegraph	20	5.12	- 6%	.83	+49%	1 in 61	1 in 303	1,200	33
Water	22	24.33	-10%	1.74	+11%	1 in 142	1 in 237	1,470	14
Heating	8	7.53	+57%	.14	-57%	.....	.....	.....	..
Not Otherwise Classified	11	31.32	+34%	1.60	-69%	1 in 154	1 in 173	777	15

*Corrected for certain duplication of records in Gas and Electric and Other Operations.
**Source: Reports to American Gas Association and transmitted to National Safety Council.

"Jet" Method for Fighting Bombs Proved Superior to "Spray"

The superiority of fighting incendiary bombs with a "jet," instead of a "spray," was conclusively proved at a demonstration by the Army Chemical Warfare Service in New York, July 30, before Mayor LaGuardia and New York fire and civilian defense officials.

Fifteen seconds was the time required to extinguish a four-pound fire bomb with a jet; 1 minute and 5 seconds, by the old-fashioned spray. Besides taking more than four times as long by spray, that method required more than twice as much water.

The demonstration was provided to remove any uncertainty as to the efficacy of the new instructions for fighting fire bombs, recently announced by Office of Civilian Defense Director James M. Landis. The new instructions were the result of exhaustive research by technicians of Office of Civilian Defense and the Army Chemical Warfare Service and study of recent British experience.

"The jet method is much quicker and more effective," Mr. Landis reiterated.

Peoples Gas Sells Pipeline

Peoples Natural Gas Co. on August 11th was permitted by the Securities and Exchange Commission to sell a $132,551 natural gas pipeline, located in St. Paul, Minn., to the Northern States Power Co., a non-affiliate.

Northern States will pay Peoples $1 cash and agree to transport enough gas at no charge for Peoples to fulfill obligations with its two industrial customers until the contracts expire or are signed. The commission made the condition that Peoples parent, Northern Natural Gas Co., make a donation to the subsidiary of $56,719.

GLOVER-WEST

CARBONIZING SYSTEMS

• *boost* production

• *cut* fuel costs

440 CARBONIZING PLANTS, in 24 countries, testify to the outstanding advantages of GLOVER-WEST Systems.

Today, with the fate of civilization depending on the speed and efficiency of our war-output, these advantages cannot be overstressed:

GLOVER-WEST CARBONIZING SYSTEMS

- ***LOWER*** Fuel Consumption and Maintenance
- ***FACILITATE*** Operation
- ***PRODUCE*** dryer, cooler Coke
- ***REQUIRE*** less Ground Area
- ***INSURE*** greater Flexibility

Let us give you full details. WRITE:

WEST GAS IMPROVEMENT CO.
424 Madison Ave., New York, N. Y.

All sizes up to 3,400 cu. ft. capacity

Meters
Diaphragms
Repairs
Provers
Pumps
Calorimeters
Wet Meters
Gauges
Apparatus

METER REPAIR PARTS

FOR
ALL MAKES — ALL SIZES OF METERS

LARGEST GAS COMPANIES NOW USING OUR PARTS

SEND FOR OUR CIRCULAR ON METER REPAIR PARTS

SAMPLES AND PRICES GLADLY SENT

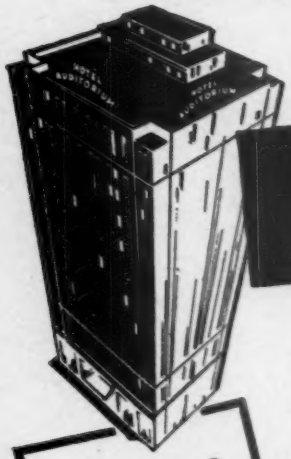
— o —

LAMBERT METER CO.

PLAINFIELD, NEW JERSEY

FOR ECONOMY-MINDED TRAVELERS

CLEVELAND'S
NEWEST **DOWNTOWN HOTEL**



Hotel Auditorium

In the heart of the downtown business section, just across the street from the famous Public Auditorium. Near all railroad stations. 300 comfort-planned rooms with private bath (tub or shower). Popular-priced Coffee Shop, Dining Room and Alpine Tavern. Garage adjoining hotel.

RATES
FROM
$2 SINGLE
$3.50 DOUBLE

CRUSE-KEMPER COMPANY

STEEL PLATE CONSTRUCTION

AMBLER, PA.

GAS HOLDERS

HOLDER INSPECTION

RIVETED OR WELDED FABRICATION & ERECTION

TANKS, BINS, FLUES PURIFIERS, WELDINGS

ALFRED I. PHILLIPS

CONSULTING ENGINEER

Rate Developments — Valuations

Reports — Design

Management

53 PARK PLACE — NEW YORK

W. Alton Jones, President Cities Service Co. New York, Named Head of Emergency Pipelines, Inc.

A government-owned line that will funnel crude oil from the prolific East Texas oil field to Illinois, where it will be transported via other transportation facilities to Atlantic coast refineries—will afford substantial relief early next year to the transportation deficiency now responsible for petroleum rationing on the East Coast.

Photo courtesy Lincoln Electric Co., Cleveland, Ohio

Roll Welding a Section of the Pipe Line

The new line, to be built of 24-inch seamless steel tubing, will be the largest oil line in the world. The 550-mile artery will extend from Longview, Tex., to a point in Illinois, probably near Norris City. From here, the 300,000 bbls. of oil daily piped through the line will be fanned out to Atlantic coast refineries by tank car, by barges loaded at a nearby Ohio river terminal and by pipeline to Great Lakes terminals, where it could be loaded in lake tankers, river barges or tank cars destined for the East coast.

Selected to head this $35,000,000 pipeline as president of the War Emergency Pipeline, Inc., is W. Alton Jones of New York president of Cities Service Co.

B. E. Hull, president of the Texas Pipe Line Co. and official of the Texas-Empire Pipeline Co., is the vice president and general manager.

Major A. N. Horne, formerly manager of Empire Pipe Line Co., is general superintendent in charge of operations.

The first weld on the 550 mile pipe line was made at noon August 3rd by Williams Brothers Corporation, first of the seven contractors to begin construction.

The balance of the line is being carried on by six other prominent contractors who have pipe already on the job and are beginning to weld. These contractors are:

O. E. Dempsey Construction Company, Tulsa, Oklahoma

Anderson Brothers, Tulsa, Oklahoma

Oklahoma Contracting Company, Dallas, Texas

C. S. Foreman Company, Kansas City, Missouri

Ray E. Smith Construction Company, El Dorado, Kansas

Sheehan Pipe Line Construction Company, Tulsa, Oklahoma

The pipe line is the largest completely arc welded crude oil pipe line in the world. Illustration shows operators roll welding a section making finish welds preparatory to bell-hole tie-in welds.

Fuel Firms Ordered to Connect Systems to Avert Shortage

In order to avert a gas shortage next winter in that part of central Ohio served by the Ohio Fuel Gas Co., the WPB has ordered the Panhandle Eastern Pipe Line Co. and the Ohio Fuel Gas Co. to establish an interconnection that will permit the delivery of gas from the Panhandle company to the Ohio company.

The pipe lines of the two companies join at the Indiana-Ohio State line between Muncie, Indiana, and Dayton, Ohio. An interconnection can be made by simply opening a cut-off valve.

There is no gas shortage now in the area served by the Ohio company but a shortage is expected next winter unless steps are taken to prevent it. The inter-connection ordered in Directive No. 1 to Limitation Order L-31 is such a measure.

In addition to this action, J. A. Krug, then chief of the WPB power branch, wrote on July 27 to the presidents of both gas companies requesting them to make arrangements for another inter-connection between the two systems in the vicinity of Toledo.

Gas Industries Told How to File Exception Applications

Correct procedure for members of the natural gas and natural gasoline industries who file applications for exceptions under Conservation Order M-68 was explained July 28, by Deputy Petroleum Coordinator Davies.

Copies of applications for exceptions are to be forwarded to the Director of Natural Gas and Natural Gasoline, Office of Petroleum Coordinator, New Interior Building, Washington, D. C.

Exceptions in Other Branches

Applications for exceptions in other production branches of the industry will continue to be forwarded to the Director of Production, Office of Petroleum Coordinator, New Interior Building, Washington, D. C.

In all cases, three copies of the applications should be sent directly to the division concerned in Washington. A fourth copy should be mailed or delivered to the OPC district director of natural gas and natural gasoline or the district director of production, as the case may be, for the district in which the lease, pool, or plant is located.

News of the Gas Industry

Federal Power Commission Issues Certificate of Public Convenience and Necessity to United Gas Pipe Line Company

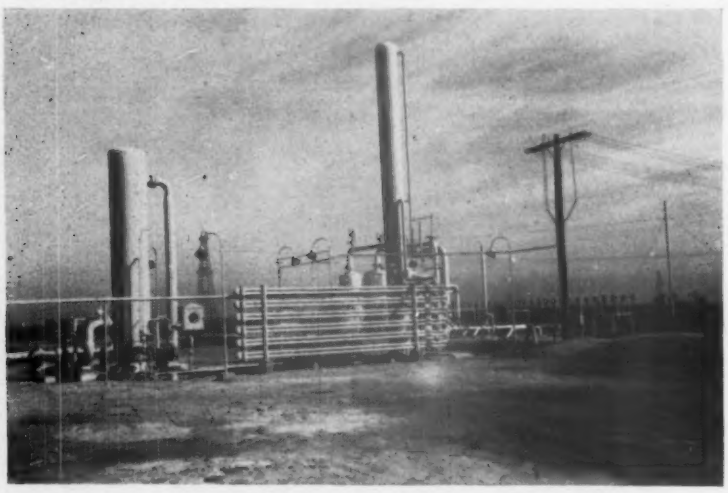
The Federal Power Commission announced August 21st that it has issued a certificate of public convenience and necessity to the United Gas Pipe Line Company, Shreveport, Louisiana, for construction and operation of approximately 38 miles of 12¾ inch natural gas pipe line in the nature of a loop of its facilities from the Lake Long Field in southern Louisiana to a point near St. Rose where it will connect with the company's Baton Rouge-New Orleans Line. Application for authority to construct the new line was filed by the company on June 19, 1942, pursuant to Section 7(c) of the National Gas Act, and a public hearing was held in the matter on August 3.

According to the application, United has received notice to increase its maximum daily delivery to New Orleans Public Service, Inc., from 86,000 MCF to 135,000 MCF, and to Louisiana Power & Light Company from 25,000 MCF to 48,000 MCF, not later than December 15, 1942. It was stated that these increases in demands are made necessary by the National War Program, as well as the general development in the New Orleans area.

The order states that on August 12, 1942, the War Production Board authorized the Applicant's proposed construction of the Lake Long Loop line, the conversion of the Baton Rouge-New Orleans line to a high-pressure pipe line and assigned perference ratings for necessary materials.

The authorization contains the following provisions: (1) that issuance of the certificate is without prejudice to the authority of the Commission with respect to other proceedings: (2) that construction of the line shall conform to provisionns of the Natural Gas Act and applicable State laws; and (3) that the certificate shall not be transferable except upon express approval of the Commission.

New De-hydration Plants Increase Pipeline Life and Prevent Lowering of Carrying Capacity



One of the first dehydration plants located in Kern County.

De-hydration plants recently installed at two fields have enabled the Southern Counties Gas Co., Los Angeles, to completely eradicate the moisture condensation problem, thereby providing for longer pipe life and eliminating the danger of capacity reductions due to deposits of corrosion.

The new plants, first of their type on the Pacific Coast, take the water out of gas from the Coles Levee field and the Greeley field in Kern County, Calif. Each plant has a capacity of about 25,000,000 cubic feet per day.

Although the two plants involved a new investment of nearly $30,000, company officials feel that results will fully justify the cost. Pipeline life will be increased almost indefinitely, it is believed. And, in addition, the danger of capacities being reduced by the development of large deposits of corrosion will be completely eliminated.

In Southern California where the available supplies are already being heavily taxed by a rapid growth in population and by vast war-industry development, the latter point is most important. An appreciable change in pipe capacity could cause a shortage of gas at the points where it's needed most.

Since the anti-corrosion plants serve new pipelines, it is impossible to compare past performance with present operation. However, tests show that when the gas is treated, dew point is lowered to where there is absolutely no condensation in the pipes.

On other lines where no de-hydrating equipment is used, water condenses freely and a constantly-increasing amount of corrosion develops. Long before that corrosion will go through the pipe, it begins to affect carrying capacity to a considerable extent.

These plants operate on exactly the same principle as an absorption plant. The gas travels upward through a series of bubble plates and passes through trays containing diethylene glycol—the dehydrating agent. The diethylene absorbs the excess moisture, the gas then passing on into circulation in the regular way.

To make possible re-use of the glycol, it is run through a small still operating at 300 degrees. The moisture content is thus driven off and the glycol is again ready for use.

The two California plants were installed on Feb. 1 of this year and have been in continuous and highly efficient operation ever since.

Pacific Coast Gas Assn. Elects Officers

At the 49th Annual Meeting of the Pacific Coast Gas Association, held Sept. 4th at the St. Francis Hotel, San Francisco, Calif., the following officers were elected for the coming year:

President: F. M. Banks, Vice President, Southern California Gas Company.

Vice President: E. L. Payne, Vice President & General Manager, Payne Furnace and Supply Company.

Treasurer: D. G. Martin, General Auditor, Pacific Gas and Electric Company.

Director (2 year term): R. G. Barnett, Vice President & General Manager, Portland Gas and Coke Co.; E. H. Coe, President, Central Arizona Light and Power Company; H. W. Edmund, Sales Manager, Coast Counties Gas and Electric Company; F. A. Woodworth, President, Spokane Gas and Fuel Company.

Director (one year term to fill unexpired term of C. O. Menig, resigned): A. H. Sutton, President, Mission Water Heating Company.

Colorado Public Service Sets Up Plan to "Ration" Gas To Industrial Users

Much of the serious problem of furnishing sufficient gas to military centers and manufacturers engaged in war work with limited pipeline facilities is being solved at Colorado Public Service Company, Denver, by "rationing" gas to all industrial users for the peak period.

Colorado Public Service Company is at present experiencing an all-time peak load even during the summer months, as the result of the opening up of two new airfields near Denver, a new arsenal and a new chemical plant, in addition to large munitions and manufacturing demands from existing organizations. Since early this year, the industrial gas engineering department has been in the unusual position of de-emphasizing the use of gas for non-defense purposes. It has taken all salesmen off the job of selling more gas and put them to cutting down its use and suggesting standby methods which will see non-critical manufacturing plants through the winter.

In years past, some industrial plants have been asked to voluntarily reduce their gas consumption to relieve the residential load. Now, with more than forty manufacturers turning out essential war materials, it will not be possible to make these reductions, according to Colorado Public Service. "Gas will be issued on a priority system of our own," the engineering office reports, "whereby those manufacturers producing armament, ship parts, army trailers and munitions will receive first call. Otherwise, manufacturers will have to devise a separate method of heating their plants and of using heat in production."

In several instances, Colorado Public Service has been able to set up practical systems whereby smaller industrial gas users will be able to substitute oil, coal or other fuels as standby equipment for the winter season. Several business buildings will burn stoker coal during the worst of the cold weather, and many manufacturing plants have installed burning equipment to use oil with a minimum shutdown period. Every factory has been surveyed with the conversion idea uppermost, and a good deal of gas consumption appears to have been eliminated.

Natural Gas Section A.G.A.

The Natural Gas Section meeting in Chicago (La Salle Hotel) will be held Monday morning, October 5. All other Sections have the afternoon and evening of that day, beginning with luncheon if they desire.

To reiterate, the General Program Committee has barred any Section or Committee meeting Tuesday, October 6, between the hours of 10 and 5.

H. Carl Wolf, Chairman A.G.A. Advertising Committee

H. Carl Wolf has been elected chairman of the Committee on National Advertising, succeeding Major Thomas J. Strickler, who has served in that capacity since the gas industry's national advertising program was initiated six years ago. Major Strickler will continue as a member of the Committee.

News of Major Strickler's desire to retire as chairman was received with regret by the Committee at its May 3rd meeting in New Orleans. After assuring themselves that he would not reconsider his decision to retire, members of the Committee nominated Mr. Wolf for chairman and he was later unanimously elected to that office by vote of the Committee.

Mr. Wolf is president of the Atlanta Gas Light Co., Atlanta, Ga., and associated companies in southeastern territory. He is president of the Atlanta Chamber of Commerce, a past president of the Indiana Gas Association and the Southern Gas Association, and a past chairman of the A. G. A. Industrial and Commercial Gas Section. He is also a director of the American Gas Association.

Gordon M. Jones Succeeds J. C. Smith at Reading, Pa.

Announcement was recently made by Allyn C. Taylor, President, Consumers Gas Company, Reading, Pa., of the retirement of J. Calhoun Smith, who had been sales manager at Reading since September 25, 1916. Gordon M. Jones, who for nearly 25 years had been associated with The United Gas Improvement Company in Philadelphia, was appointed to succeed Mr. Smith.

Mr. Jones started with the U. G. I. in Philadelphia in October, 1917, in the engineering department, and after a number of years in various departments became editor of the U. G. I. Circle. For the past 10 years he had been handling the advertising and sales promotional work for a number of companies in the U. G. I. System. On November 17, 1941, he was transferred to Reading as assistant sales manager of the Consumers Gas Company, and assumed his new position as sales manager of that company on July 1, 1942.

West Virginia University to Dedicate New Mineral Industries Building

As a fitting tribute to the opening of the institution's seventy-sixth academic year, West Virginia University on October 16 and 17 will dedicate its new million-dollar Mineral Industries Building at Morgantown, W. Va., called by competent authorities the finest structure of its nature in the United States.

Begun in 1940 after years of careful planning, the building embodies factors which make it the fulfillment of the dreams of the scientist, engineer, teacher, and student. Now fully completed and equipped, it houses the School of Mines, the West Virginia Geological Survey, the Department of Geology, and the Department of Chemical, Metallurgical, and Ceramic Engineering.

Dr. Friend E. Clark, chairman of the University Graduate Council and head of the Department of Chemistry, in his capacity as chairman of the dedication committee has announced a tentative two-day program which calls for the appearance of speakers of national and State-wide reputation, including Governor M. M. Neely and President Charles E. Lawall of the University.

An imposing six-story structure situated at the gateway to the campus, the building has taken its place upon the Morgantown skyline not only as a valuable addition to the research and instructional facilities of the University but also as a contribution to the architectural beauty of the campus.

Problems incident to the measurement and regulation of gas flow are studied by means of a two-stage rotary compressor of 6,000 feet capacity which supplies the air. To facilitate such studies the oil and gas laboratory is equipped with various types of orifices and displacement meters, regulators, and a venturi tube as well as dew point and specific gravity apparatus. Critical flow, low pressure, and a five-foot ball type prover are provided. Equipment also is installed for the study of porosity, grain size, permeability, and saturation of reservoir rocks.

The oil and gas laboratories have specialized equipment for analyzing both petroleum and natural gas by fractional distillation—a process through which is measured the content of such hydrocarbons as butane—raw material for synthetic rubber—ethane, methane, propane, etc., in natural gas and petroleum.

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Laboratories Issue New Industrial Gas Research Bulletin

Research Bulletin No. 15, "Combustion of Gas with Limited Air Supply," has been distributed to all members of the Committee on Industrial Gas Research, headed by Mr. J. W. Batten, for their advance review. It forms the second and final bulletin on Research Project No. 36, "Research in Reducing Atmospheres Produced by Combustion of Industrial Gas," assigned the Testing Laboratories by the supervising committee. Initial studies were reported in Bulletin No. 11, published in 1940.

Principal attention has been devoted in the new bulletin to composition of combustion products of typical fuel gases with variations in air supply from the full quantity needed for complete combustion to a fraction of this amount. In addition to experimental furnaces, commercial size units were also employed so that the results would be more generally applicable. Limiting aerations below which combustion was not self-supporting were established. Data presented are given in more complete form than have heretofore been published.

A summary of technical information dealing with furnace atmospheres is included as a separate chapter. While no actual studies were made on the effect of various furnace atmospheres on metals, general properties of their principal constituents are listed and their action on metals summarized. Laws of chemical equilibrium are discussed and examples presented to illustrate how they may be used to estimate effects of atmospheric gases on a metal. These include examples of their use for determining the probable action of furnace atmospheres for a definite application.

Individual treatment is given to intermediate-oxidation compounds formed from gaseous combustion, including aldehydes and others. Study of available methods of analysis showed them to be unsuitable for quantitative determinations in small concentrations, and modifications were therefore made to permit their satisfactory application. Results are presented of complete analyses of aldehydes and similar products resulting from combustion of various fuel gases, obtained by use of these modified procedures.

Those employing gaseous atmospheres for heat treating and similar applications will find the complete and original data contained in Bulletin No. 15 of great value and assistance. Available at a time when demand for war materials is at an all-time peak, added facilities are thus provided for increasing production and aiding our war effort.

D. M. McCallister Succeeds T. F. Danehy

D. M. McCallister, who has been manager of the National Utilities Company plant at Monroe, Mich., since Sept. 1, 1933, has been named manager of the Wisconsin Fuel and Light Co. plant at Manitowoc, Wis., succeeding Thomas F. Danehy, who died recently. Mr. McCallister has been associated with the parent company, the National Gas and Electric Co., since 1911.

Alan P. Tappan Commissioned As Captain A.A.F.

Alan P. Tappan, Vice President, The Tappan Stove Company, Mansfield, Ohio, has taken leave from his Company and has been commissioned a Captain, A.A.F., Air Service Command, Wright Field, Dayton.

Alan P. Tappan

After leaving Cornell University, Captain Tappan enlisted in Company M, 8th Ohio Inf., which was later active on the Mexican Border; appointed 2nd Lieutenant after attending Officers Training School at Ft. Benj. Harrison; in 1918 was transferred to Air Corps, served as Flying Instructor in Texas and California and was promoted to Officer in Charge of Flying with 312th Squadron at Bolling Field.

After World War I he was commissioned Captain, Specialist-Reserve, and at Mansfield served as Officer in Charge of Reserve Officers Training Program.

Hubert Tappan, formerly western manager of the Tappan Stove Company, has been appointed president of the organization, succeeding his brother.

Victory Program on Refrigeration and Air Conditioning

Five regional meetings will be held throughout the country this month in connection with the "Victory Program" of America's refrigeration and air conditioning industry, it is announced by John K. Knighton, of Evansville, Ind. Mr. Knighton is manager of the air conditioning division of Servel, Inc.

The program is a voluntary conservation movement of the industry designed to make material contribution to the war effort through the "saving, simplifying and substituting" of those vital materials needed for war production. A specific plan is now being developed for conserving manpower, electrical energy, manufacturing facilities, as well as material.

The cities in which these regional meetings will be held, and the dates scheduled for them, are as follows:

New York, September 14, E. T. Murphy, Carrier Corporation, chairman; Dayton, September 16, P. B. Zimmerman, Chrysler Airtemp Division, chairman; Chicago, September 18, Frank Smith, Tecumseh Products Company, chairman; St. Louis, September 21, A. B. Schellenberg, Alco Valve Company, chairman; Los Angeles, September 25, Sandy Pratt, California Refrigeration Company, chairman.

The exact time and place of the meetings are to be announced at a later date. All members of the industry are requested to communicate directly with the chairman of the meeting nearest their locality to affirm their intention to attend.

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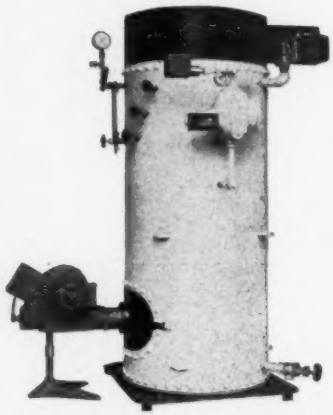

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Standard Oil of New Jersey May Yield Natural Gas Stock To Shareholders

Stockholders of Standard Oil Co. of New Jersey stand to receive $81,850,770 of gas utilities securities in a new company, if a Standard Oil plan to escape the holding company act goes through, it was disclosed today.

In an application filed with the Securities & Exchange Commission, the Consolidated Natural Gas Co., now being formed by Standard Oil, proposes to acquire $81,969,300 of outstanding capital stock of four Standard Oil gas subsidiaries in exchange for its own common stock. This new Consolidated stock would be distributed to Standard Oil shareholders.

The subsidiaries involved are the Hope Natural Gas Co., serving Parkersburg and Clarksburg, W. Va.; East Ohio Gas Co., serving Cleveland, Akron, Canton, Youngstown and Warren, Ohio; People's Natural Gas Co., serving principally Pittsburgh and Altoona, Pa., and the River Gas Co., operating principally in Marietta, Ohio, and surrounding communities.

Exemption Denied

The SEC already has denied Standard Oil exemption from the holding company statute, basing its action on Standard's 100 per cent control of the four gas companies and partial control of other utilities.

Under the plan, Consolidated would issue to Standard 2,728,359 common shares, $30 par value, with a total value of $81,850,770.

Standard Oil then would file notification of registration under the holding company act and at the same time a voluntary plan for divestment of control over Consolidated.

Should the program be approved and Standard Oil directed to divest itself of the Consolidated holdings, the Consolidated securities would be distributed to Standard Oil shareholders.

The commission set Sept. 22 for a hearing on the Stock Exchange proposal and to determine whether the four gas companies constitute a single integrated public-utility system under the holding company act.

F. B. Jones Promoted

F. B. Jones, general sales manager of the Equitable Gas Co., Pittsburgh, Pa., was appointed to take complete charge of sales and service activities for both Equitable and the Pittsburgh and West Virginia Gas Co. upon the retirement of Joseph McKinley, the Equitable vice-president in charge of sales.

Mr. Jones, a native of Kentucky, was graduated from the University of Kentucky with a degree of Bachelor of Science in Chemical Engineering, and first entered the employ of Equitable Oct. 1, 1925, as an industrial engineer. A few months later he was made industrial gas sales engineer, and on May 1, 1927, was promoted to industrial gas supervisor. On May 16, 1928, he was made director of industrial gas sales, and on Feb. 15, 1939, he was appointed general sales manager of the Equitable Gas Co. and the Pittsburgh and West Virginia Gas Co.

Last Three Roper Gas Ranges Presented to U.S.O. Clubs

At an informal ceremony held July 31 at the Geo. D. Roper Corporation, Rockford, Ill., the last three Roper gas ranges to be manufactured for the duration were presented to the United Service Organization clubs of Rockford.

In behalf of all Roper employees presentation was made by Mabon P. Roper, President of the Geo. D. Roper Corporation, to Captain William P. Blomgren, representing the Salvation Army U.S.O.; Mr. Chas. J. Vaughn, representing the Catholic U.S.O.; and Mrs. Myrtle Fetzer, Chief Hostess of the U.S.O. club located on Walnut Street, which includes Y.M.C.A., Y.W.C.A. and Jewish Welfare Bureau.

The ranges presented, each identical in features, are of the finest deluxe models manufactured by Roper. Each bears the C.P. seal of Certified Performance indicating that the range fully meets 22 rigid requirements established by the American Gas Association. The ranges have six top burners, large oven, and broiler. They are fully automatic.

The ceremony was not without a serious side, especially on the part of Roper workmen. For after a company has continuously manufactured a product for 57 years, as is the case of the Geo. D. Roper Corporation, it is difficult to give up this manufacture even though it is known that the interruption will be temporary.

Some of the Roper foremen and other workmen took the opportunity to bid these ranges goodbye by writing their names on them as they reached the end of the production line.

Foremen and other workmen bid these ranges goodbye with their signatures. Left to right: Joe Markanus, Harold Stock, Dick De Long, Harry Larson and Volley Kimery.

S. E. C. Approves Sale Of Utility Unit Assets

The Securities and Exchange Commission on August 10th approved the proposed sale by National Gas & Electric Corp. of all the securities of its subsidiary, Greeley Gas & Fuel Co., to Keith Kindred, of Chicago, for $200,000 in cash. The securities include $160,000 in first mortgage 5 per cent bonds, due 1953, and 400 shares of no par common stock with a stated value of $40,000.

The amended applications of Peoples Natural Gas Co. (Delaware), Northern Natural Gas Co. (Delaware), and Northern States Power, dealing with the proposed acquisition by Northern States of certain gas utility assets in St. Paul, Minn., were approved by the commission, with the provision that Northern Natural Gas make a donation to be credited to capital surplus, of $56,719 to Peoples, its wholly owned subsidiary.

Recent Consumers Gas Appointments

Four veteran members of the Consumers natural gas organization assumed new titles and added responsibilities Aug. 1.

H. L. Fruechtenicht, Jr., who was gas field superintendent, is now general natural gas superintendent. As such he will have charge of all phases of natural gas production, compression and transmission, reporting to D. E. Herringshaw, general gas engineer.

H. J. Neilson, formerly gas transmission superintendent in the Bay City-Saginaw Divisions, has assumed charge of transmission through all Company pipelines, including those serving the Lansing and Alma areas. His title is natural gas transmission superintendent.

Don G. Daykin, formerly gas production superintendent of the Flint Division, is now compression superintendent, in charge of the operation of four compressing stations.

West Virginia Bituminous Coals

To provide manufacturers of war materials and other users of solid fuels with detailed information regarding West Virginia bituminous coals, the Bureau of Mines has completed a 340-page volume which contains analyses by Bureau chemists of more than 2,800 samples of coals from that state, Dr. R. R. Sayers, Director of the Bureau, stated.

By referring to the technical publication, industrial users and other consumers will be able to determine immediately the characteristics and qualities of coal mined in any part of West Virginia, the state that produces one-fourth of all the coal used in the United States and leads all states in the output of bituminous-grade coals, Dr. Sayers informed Secretary of the Interior Harold L. Ickes.

In addition to chemical analyses of coals, the volume contains chapters describing the coal fields and mines from which samples were obtained, production methods, and data regarding transportation and use of solid fuel mined in the state.

In addition to the proximate and ultimate analyses made by Bureau chemists, the tabulations in the publication include heating values, ash-softening temperatures, agglomerating indexes and classification of coals by rank—important factors which are weighed by prospective purchasers of coal.

Copies of the publication, "Analyses of West Virginia Coals," Bureau of Mines Technical Paper 626, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 45 cents per copy.

R. R. Blackburn is Sec'y. Southern Calif. Gas Co.

R. R. Blackburn has been elected secretary of the Southern California Gas Company, succeeding F. E. Seaver, who retired on August 1 under the company's uniform pension and benefit plan, according to an announcement made by F. S. Wade, president.

Blackburn was formerly assistant secretary and general agent of the company. He will continue to serve as general agent.

Seaver has been affiliated with the company and its predecessors for 35 years.

"Keep 'Em Rolling"

A booklet issued by B. F. Goodrich Co., Akron, Ohio, shows illustrations from the film "Keep 'Em Rolling" issued by the Motion Picture Dept. of the Company.

It is the story of rubber in transportation and the vital role it plays in America at war.

There is no charge for the use of the film which is a 16 mm. sound motion picture which is 937 feet long and runs for 25 minutes.

Available for showing to any responsible church, school or club group, the only cost being return postage or express after showing.

Application forms and descriptive booklet available through the Motion Picture Dept. of the Company or through local B. F. Goodrich dealer.

Two Roper Officials Advance To New Positions

Two men with a number of years background with the Geo. D. Roper Corporation have recently taken over new duties with the company.

Floyd K. Lawson, formerly Sales Director of the Range Division, has been elected Secretary-Treasurer to take the place of T. J. Reynolds, deceased. E. Carl Sorby has been elected Vice President in immediate charge of gas range sales. Since gas range production has been stopped July 31 Sorby's work will be closely associated with war production for the duration.

Floyd K. Lawson

E. Carl Sorby

Starting with the company in 1917 in cost and payroll work, Lawson has more than 25 years' experience during which time he has worked in various departments and become familiar with all phases of Roper's extensive operations. During the last 15 years his work has been in range sales. For 12 years he has acted as Sales Director of the Range Division.

Sorby was Appliance Salesman then commercial manager of the Wisconsin Power and Light Company, Beloit, Wisconsin from 1922 to 1928. Joining the Roper organization in 1928 he was placed in charge of retail research work in Cleveland, Ohio. In 1934 he returned to Rockford as Promotion Director.

Sorby is well-known throughout the entire United States and Canada for the work he has done in promoting gas cookery and the C.P. gas range through utility and dealer groups.

Pacific-Airmax Corporation Formed by Merger

Helen A. Hartfield, president of Pacific Gas Radiator Company, and R. C. Gross, president of Airmax Corporation announce the merger of Airmax Corporation, San Diego, California, manufacturers of aircraft heating equipment, with Pacific Gas Radiator Company, Huntington Park, California, under the new firm name of Pacific-Airmax Corporation.

"The merger was effected primarily to facilitate and extend the participation of both of the merging organizations in the way of war effort," said Mrs. Hartfield, who continues as chairman and president of the corporation.

R. C. Gross, president of Airmax Corporation has been appointed vice president and general manager of Pacific-Airmax Corporation and A. A. Arnhym, also of Airmax, will be chief engineer.

Ohio Foundry Elects New Officers

At a recent stockholders meeting of the Ohio Foundry & Manufacturing Co., Steubenville, Ohio, George H. McFadden was elected president. The retiring president, W. L. Sharpe, becomes chairman of the board. Mr. McFadden, a grandson of the founder, has served on the sales staff, as factory superintendent, treasurer and general manager.

Other officers elected are H. C. Zeis, Vice-President & Secretary and C. P. McFadden, Treasurer.

Gaidry Re-Nominated A.G.A. Section Chairman

Harold L. Gaidry, gas engineer of New Orleans Public Service, Inc., has been renominated as chairman of the Technical Section of American Gas Association for the coming year. John H. Wolfe, general superintendent of gas operations, Consolidated Gas, Electric Light & Power Co

Harold L. Gaidry

of Baltimore, and present vice-chairman of the Section was slated to succeed Chairman Gaidry but was unable to accept the nomination due to pressure of war work.

Charles F. Turner, chief chemist of The East Ohio Gas Co., Cleveland, has been nominated for vice-chairman of the Technical Section.

N. Y. Gas and Electric Bills May Be Postcard Mailed

The Public Service Commission granted permission Aug. 11 to New York gas and electric companies to use postcards for billing purposes to save costs and conserve materials.

The Commission ruled companies using this method must furnish customers with a card giving rates and the classification under which the customer is served. Users also must be notified by card of a change in rates.

Most companies now send bills in sealed envelopes.

The Commission recently granted a permit to Niagara Hudson system companies to read meters bi-monthly and quarterly to save tires and gasoline.

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The Annual A. G. A. Convention to be Streamlined

In complete harmony with the government's war policies, the sole purpose of the regular annual convention of the American Gas Association to be held Monday and Tuesday, October 5 and 6 at LaSalle Hotel, Chicago, will be to deal with major problems of the gas industry arising from the conflict, to effect thorough cooperation in all the war effort, and to consider post-war plans and adjustments.

The all-out character of the war and the nearly complete change-over of the entire industrial production machinery to war purposes has created unprecedented problems which will be thoroughly aired. Within the framework of the program now taking shape, first attention will be given to any possible additional assistance to the war program. Occupying second place, but no less important, will be consideration of planning and research necessary to prepare the industry for post-war changes of great magnitude. Subjects to be discussed and speakers will not be announced until just before the meeting to allow greater flexibility and concentration on matters of up-to-the-minute urgency and timeliness.

In contrast to the normal three-day program of events, only one day, Monday, will be set aside for sectional meetings. These will be restricted to problems of paramount importance in relation to the war effort. The events will open Monday morning with the meeting of the Natural Gas Section, which will also hold an executive dinner that evening. The luncheon period, the afternoon and the evening if desired, have been set aside for meetings of the Accounting, Industrial and Commercial Gas, Residential, and Technical Sections.

The entire second day, Tuesday, after the Home Service Breakfast which will inaugurate the formal program, will be devoted to General Sessions at which vital over-all industry problems will be clarified.

The routine business will be concentrated briefly in the opening General Session, including the election of officers. The presidential address will be by George S. Hawley, president of The Bridgeport Gas Light Company. President Hawley will set the tenor of the meeting and highlight the major points.

Of outstanding interest will be the report of the Committee on War Activities by Ernest R. Acker, chairman. This committee has rendered conspicuous service in coordinating the industry's war activities and directing its full energy to war production.

High on the agenda will be the report of the Committee on Post-War Planning and its very title demonstrates the importance of its message. The problem of gas supply to vital war industries has placed a tremendous responsibility upon the entire industry which will be reviewed in the light of providing complete support to the government's war program and at the same time safeguarding the industry's future. The operations of the Selective Service Act with the difficulties of maintaining effective service and at the same time contributing technically skilled men to the war effort is a vital subject.

A general luncheon will be held Tuesday noon at which annual awards for distinguished service to the gas industry will be made. These include the Charles A. Munroe Award, the Beal Medal, the A.G.A. Meritorious Service Medal, the McCall Home Service Award, and the Million-Man-Hour Awards for accident prevention.

Tire Usage

(Continued from page 18)

to go. In every case, planning of work with the idea of possible trip postponements is helpful.

"Thought about tire conservation is the thing that counts most of all," observes A. F. Bridge, Vice-President of Southern Counties. "When every employee of every gas company in the nation becomes fully tire-conscious, we'll see savings that exceed the best we could hope for now.

"We've all taken tires so much for granted for so long that a period of transition in working attitudes is inevitable. The change can be speeded up a great deal by executive planning and control. But the 'last-mile' savings will come through employee initiative. For that reason we're carrying on a constant educational program involving company bulletins and meetings. We expect to continue that effort indefinitely."

Office Price Adm. Petroleum

(Continued from page 33)

(a) "Person" includes an individual, corporation, partnership, association, or any other organized group of persons, or legal successor or representative of any of the foregoing, and includes the United States or any agency thereof, or any other government or any of its political subdivisions, or any agency of any of the foregoing.

1340.158a. *Effective dates of amendments.* * * * (y) Amendment No. 25 (1340.155 (a), 1340.155a and 1340.157 (a) to Revised Price Schedule No. 88 shall become effective August 1, 1942.

(Pub. Law 421, 77th Cong.) Issued this 31st day of July 1942.

WILLIAM H. STANGLE

William Hull Stangle, 51, new products department manager of Servel, Inc., of Evansville, Ind., died in Baltimore on Aug. 7. Mr. Stangle had undergone an operation at Johns Hopkins Hospital.

Mr. Stangle had been with Servel for three years, coming to Evansville from Forest Hills, N. Y. Prior to his joining Servel he had been with the Westinghouse Co., at Mansfield, Ohio.

At Servel Mr. Stangle had been working on products to be manufactured after the war, equipment still in the research stage. He was graduated from Pratt Institute and Columbia University where he majored in architecture, mechanical and chemical engineering.

Manufactured Gas Companies Assured of Fuel Oil

All Communications Should Be Accompanied by Carbon Copy And Addressed to

WAR DEPARTMENT
Boston Ordnance District
Room 1501, 140 Federal Street
Boston, Mass.

August 18, 1942

In Reply Refer To
BTN No. 463/840
Potter

Mr. John West, President
New England Gas Association
41 Mt. Vernon Street
Boston, Massachusetts

Dear Mr. West:

During the recent meetings between members of the New England Gas Association and this office considerable concern was expressed regarding the shortage of petroleum fuels consumed by the Manufactured Gas Industries, consequently, this office contacted Fuel Control Headquarters with a request that the fourteen day limit on supplies of fuel oil to the Gas Companies be waivered.

As a result of our inquiry to Fuel Control Headquarters, we are advised by Major John L. King as follows:

"There is no limitation, nor has there been any limitation, on manufactured gas companies' limit as to supply of enrichment fuel oil and they are at liberty to fill their tanks as fast as it can be done."

"This office is assured by Dr. Frye (Special Assistant to the Deputy Coordinator Ralph K. Davis) that if they get busy and request that their tanks be filled, they should succeed in doing so by December 1, 1942."

According to statements of the Informal Fuel Committee, if the storage tanks of the various gas companies are filled by December 1, 1942, the gas companies will have on hand enough oil to supply their demands for a minimum period of four months.

Trusting this will assist in solving the fuel problems facing the Manufactured Gas Industry in this area.

Very truly yours,

R. D. Wilhite
Major Ordnance Dept.
Assistant

By (signed)
F. W. Potter

Mfd. Gas Limitations

(Continued from page 32)

(4) If all other curtailment is inadequate, the group of war industries and essential civilian services otherwise exempted are subject to curtailment.

The order requires a utility to notify consumers about to be curtailed, and also to notify WPB of its actions.

War producers and essential civilian services listed in Exhibit A to the order include hospitals, fire and police stations, post offices, court houses, schools, prisons, public eating establishments, including restaurants, cafes, bakeries, dairies, and a long list of plants exclusively engaged in the production of war material.

Dr. Sullivan is Technical Director of Institute of Gas Technology

Dr. Frederick W. Sullivan, Jr., has been appointed technical director of the Institute of Gas Technology, Chicago, Ill. The appointment was effective Sept. 1. Dr. Sullivan will come to the Gas Institute from the Barrett Division of Allied Chemical and Dye Corporation, where he has been manager of chemical research since 1940. Previous to his service there, he was director of research for Standard Oil Company of Indiana.

Appointment of the new technical director marks the beginning of the second year of operation for the Gas Institute, which was founded Sept. 1, 1941. It is the only institution of its kind in the nation, and is the only place in the country where students may work for graduate degrees in gas technology. It was founded with four principal objectives:

1. The training of personnel for the gas industry.
2. The prosecution of fundamental research in gas technology.
3. The collection and dissemination of scientific information.
4. The conduct of applied research investigations on specific industrial problems.

Maintenance Hints for Two Cycle Gas Engine Driven Compressors

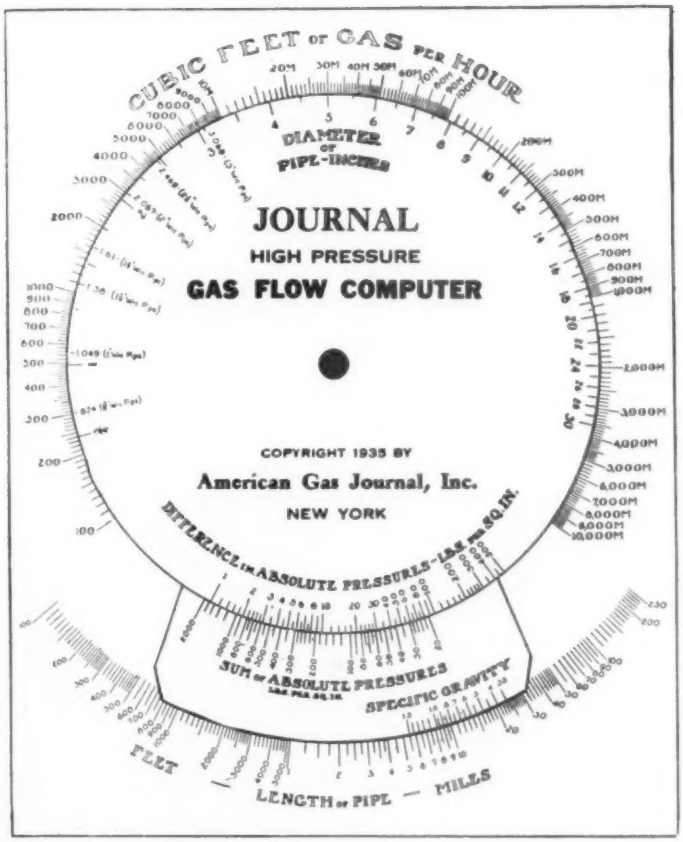
In conveniently arranged form, Clark Bros. Co., Inc., Olean, New York, manufacturers of engines and compressors, have just published a booklet entitled, "Maintenance Hints for Clark 'Angle' Super Two Cycle Gas Engine Driven Compressors."

Briefly, it considers—(1.) The *proper maintenance* of the Clark unit and *when* it should be done. (2.) The *troubles* which operators sometimes encounter and the *methods to solve* them.

Also there is a section comprised of 23 Do's and Don'ts which every plant engineer and maintenance man should know in order to reduce maintenance and repair costs.

This timely booklet contains no advertising and is available upon request.

"Journal" Gas Flow Computers



New Improved Gas Flow Computers now available of durable celluloid, encased in a convenient leatherette cover with complete instructions.

Actual Size 6¼ x 7½

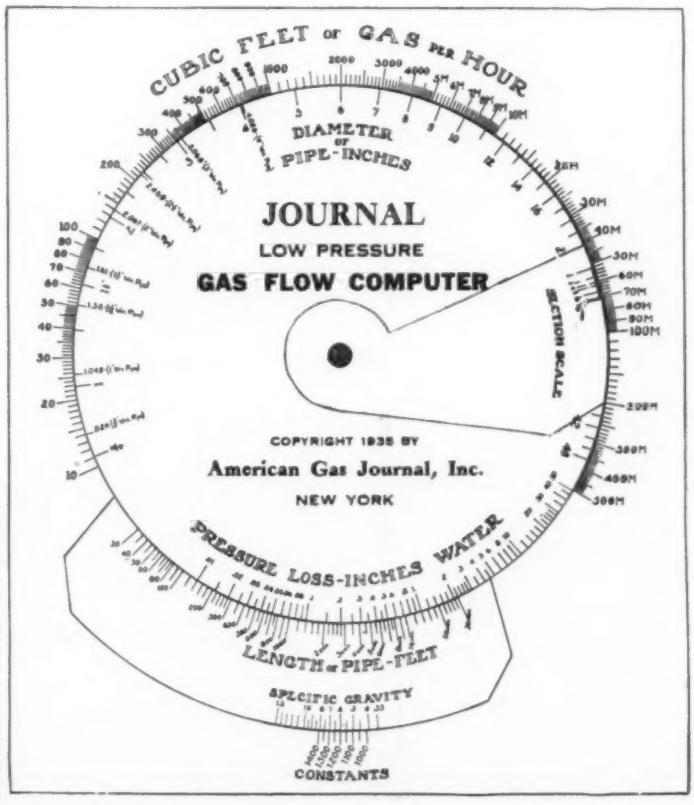
High Pressure Computer Range:

Cu. Ft. of Gas Per Hour—100-10,000 M
Diameter of Pipe Inches ¾-30
Difference in Absolute Pressure—Lbs. per sq. in. 1-500
Sum of Absolute Pressures—Lbs. per sq. in 2000-20
Specific Gravity 1.5-.35
Length of Pipe—Feet 100-5000
Length of Pipe—Miles 1-250

Low Pressure Computer Range:

Cu. Ft. of Gas Per Hour—10 to 500 M
Pipe Diameter ¾" to 48" (including standard and actual weight up to 4")
Pressure Loss Inches .01-10.
Length of Pipe—Feet 30-30,000
Specific Gravity 1.5-.35
Constants 1400-1000

Price $3.50 Each, Postage Prepaid



AMERICAN GAS JOURNAL
53 Park Place, New York

Please enter our order for Computers as follows at $3.50 each, postage prepaid

....HIGH Pressure Computer

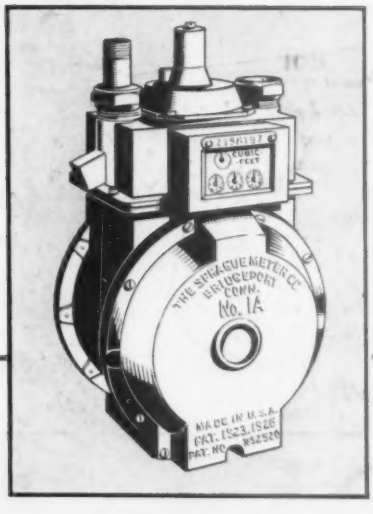
....LOW Pressure Computer

NAME .....

ADDRESS .....

It Can Be Done!

It is not easy for peace-time industries to convert to War-time necessities. It is not easy for men to change from civilian occupations to the duties of a soldier, yet if the transition was not made wholeheartedly and unquestioning the predicament in which we would find ourselves would be only too obvious. We, as equipment manufacturers for the Gas Industry, consider ourselves a part of that great body known as the "Second Front"— yet, that is not enough—we must also become part of the First Line of Defense by making our equipment do double duty. This has been accomplished not without physical and mental exertion on our part but fortunately the results have warranted the effort. Already machines that produced Sprague Gas Meters & Regulators for the four corners of the earth are now being utilized to produce War-essentials to help bring about the peace demanded by self-respecting peoples of the world.



For the Duration, we shall consider ourselves fighting on both fronts. It will not be an easy position to maintain without the full cooperation of our customers. Materials are precious and scarce, they cannot be wasted—they cannot be replaced unless WPB feels your needs warrant it. Your part on both fronts is conserving where you can and making application for special ratings where the need is imperative.

THE SPRAGUE METER CO.

BRIDGEPORT • CONN.

DAVENPORT, IOWA • SAN FRANCISCO, CAL. • HOUSTON, TEXAS

LOS ANGELES, CAL. • ST. LOUIS, MO. • MELBOURNE, AUST.